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Manual of educational statistics

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STATE INSTITUTE OF EDUCATION * BANIPUR *

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Contents

Introduction 7
I. Nature and sources of educational statistics . . . 10
II. International comparability of educational statistics . . 25
III. Statistics of illiteracy 39
IV. Statistics on the educational attainment of the population 55
V. Statistics of educational institutions: concepts and definitions 69
VI. Statistics of educational institutions: classification of schools 97
VII. Statistics of educational institutions: tabulations . . 139
VIII. Statistics of educational finance 208
Appendix. Recommendation concerning the international standardization of educational statistics adopted by the General Conference of Unesco at its tenth session, Paris, 3 December 1958 233

Introduction

STATE INSTITUTE OF EDUCATION MANIPUR

The task of an official educational statistician is to record faithfully, examine carefully, and report accurately on the status and development of education in his country. In order to perform his work well, he needs the co-operation of teachers, supervisors, inspectors and other persons who have to do with the operation of the school system, and who can supply him with the basic information. This information will be most useful if it is collected and compiled regularly and systematically, according to a set of rules based on uniform concepts, definitions, and methods of classification and tabulation. With this kind of information, expressed in numbers, the statistician can produce tables showing totals, averages, distributions, ratios, correlations and other statistical measures which can give a clear picture of the educational situation of the country and help the administration to make decisions on questions of policy and plans for further development.

In most countries where educational statistics are well established, they have usually been developed over a long period of time, after many trials and errors, with changes and revisions in the methods of collecting and compiling them. In some countries, official statistics on education are not as well developed as other types of official statistics, such as the registration of births and deaths, imports and exports, money transactions, production of commodities and other facts relating to the demographic and economic condition of the country.

While national statistics relating to education are needed in the first place for internal purposes, it is becoming more and more clear that they are also useful for purposes connected with international programmes of mutual assistance and economic development. The spread of scientific and technical knowledge throughout the world depends on a literate and educated population in each country. The transfer of skills and methods between countries is only possible where enough people are trained in the receiving country to make use of those skills and methods. The educational statisticians of different countries can help towards the attainment of these ends by presenting objective facts regarding the educational situation of each country in an internationally comparable manner.

The problem of international comparability exists in all fields of statistics. Much has been done, by the United Nations, the Specialized Agencies, and other international organizations, to improve the international comparability of statistics relating to population, economic activities, agriculture, labour, health, telecommunications and other subjects.[1] In the field of education, the United Nations Educational, Scientific and Cultural Organization, under the authority of its General Conference, has adopted a Recommendation concerning the international standardization of educational statistics.[2]

The present *Manual* has been prepared by the Secretariat of Unesco in response to the wishes of the Special Intergovernmental Committee on the International Standardization of Educational Statistics, which met in Paris, 23 June-4 July 1958, and formulated the draft recommendation on the standardization of educational statistics later adopted by the General Conference. It is intended to explain the various suggestions concerning definitions, classifications and tabulations of educational statistics included in the above-mentioned Recommendation. It is addressed to government officials responsible for the collection and compilation of educational statistics in their countries, in order to elicit their views regarding the usefulness and practical applicability of these suggestions. It is also submitted for discussion at various regional meetings on educational statistics to be held during the coming years.

According to the 'Rules of Procedure concerning Recommendations to Member States and International Conventions' covered by the terms of Article IV, Paragraph 4, of the Constitution adopted by the General Conference of Unesco, Member States are required to 'submit to the General Conference special reports on the action they have taken to give effect to conventions or recommendations adopted by the General Conference'. The rules further specify that 'initial reports relating to any convention or recommendation adopted shall be transmitted not less than two months prior to the opening of the first ordinary session of the General Conference following that at which such recommendation or convention was adopted'.

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[1] See: United Nations, *Directory of International Standards for Statistics*, New York, 1955 (*Statistical Papers*, Series M, No. 22).

[2] See: Appendix for the text of this Recommendation.

Thus the initial reports of Member States relating to the Recommendation concerning the International Standardization of Educational Statistics should be received by the Director-General not less than two months before the opening of the eleventh session of the General Conference, in the latter part of 1960. On the basis of these reports from Member States, as well as comments and views transmitted by national authorities and conclusions drawn from regional discussions, the Secretariat of Unesco will prepare a second and revised edition of the *Manual* for publication in 1963 or 1964.

In the preparation of the present *Manual*, the Secretariat has drawn largely on the information supplied by the Member States in the form of national publications, contributions to the *World Survey of Education*, and comments, at various stages, on the draft recommendation concerning the international standardization of educational statistics. It goes without saying that the members of the Secretariat have only limited knowledge of the special situations and problems regarding the compilation of educational statistics in the various countries. We therefore ask indulgence on the part of all users of the *Manual* for the shortcomings of this first edition, including any errors due to misunderstanding or misinterpretation of national practices. It is hoped that, with the active co-operation of the national authorities and technicians in all the Member States, we may be able to improve the accuracy and usefulness of the *Manual* in future editions.

Readers wishing to send their comments and observations, or to obtain additional copies of the *Manual*, are invited to write directly to: The Statistical Division, Department of Social Sciences, United Nations Educational, Scientific and Cultural Organization, Place de Fontenoy, Paris-7e, France.

I. *Nature and sources of educational statistics*

Scope of educational statistics

Broadly speaking, the field of educational statistics covers all types of numerical or quantitative data relating to educational institutions, processes and results. In practice, three major areas may be distinguished: (a) census statistics concerning the educational characteristics of the population; (b) current administrative statistics relating to educational institutions and finance; and (c) *ad hoc* statistics collected in connexion with studies of educational problems.

The first area, which overlaps the field of demographic statistics, concerns the enumeration and measurement of the population with respect to literacy and illiteracy, mental ability and educational attainment of the individual, and the type of educational institution, if any, the individual is attending at the time of the census. The enumeration of the entire population of a country with respect to these questions usually takes place at a general population census.[1] This enumeration may be limited to persons above a certain minimum age, and may be based on one or more simple questions put to the persons concerned by the census enumerator. In the absence of a complete enumeration, such data may be obtained by means of sample surveys, which may or may not include measurement by the use of suitable tests.[2] However, the measurement of the mental ability and the educational attainment of a whole population, even within limited age ranges, is an undertaking of such magnitude and complexity that special surveys have to be organized for this purpose.[1] In this respect, such surveys have much in common with the *ad hoc* investigations on educational problems to be mentioned below.

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[1] See: United Nations Statistical Office, *Handbook of Population Census Methods*, Rev. 1 (2 vols.). New York, 1958, 1959 (*Studies in Methods*, Series F, No. 5, Rev. 1).

[2] See, for example: United States Bureau of the Census, *Illiteracy in the United States: October 1947* (*Current Population Reports*, Series P-20, No. 20), 22 September 1948; *School Enrolment, Educational Attainment and Illiteracy: October 1952* Washington, D.C., Government Printing Office. (*Current Population Reports*, Series P-20, No. 45), 22 October 1953. Also: Japan, Literacy Investigation Committee, *Nihonjin no Yomikaki Noryoku* (The reading and writing abilities of the Japanese), Tokyo, Tokyo University Press, 1951.

The second major area of educational statistics—current administrative statistics on education—is the chief preoccupation of the statistical bureaux in official and non-official agencies concerned with education. This area includes current quantitative data on schools, teachers and pupils at all levels and for all types of education; receipts and expenditure of government and other public bodies for educational purposes; number of students who pass examinations, receive promotions, certificates and diplomas (or fail to do so).[2]

The third major area of educational statistics includes all kinds of data collected in connexion with *ad hoc* investigations of educational problems which are susceptible to statistical analysis. These may be concerned with, for example, the number and capacity of school buildings and classrooms; the qualifications, status and salaries of teachers; the scholastic achievement, physical measurements and mental health of pupils; the social origin of school pupils and university students; the costs of education; the causes and remedies of illiteracy; pupil absenteeism and wastage. The sources of data, coverage of population, methods of compilation and analysis, etc., will vary in each case according to the nature of the problem. The investigations may or may not be repeated at certain intervals; the methods may or may not be changed. There is naturally a large degree of overlapping between this and the other areas of educational statistics mentioned above. Many *ad hoc* investigations tend to be repeated at frequent intervals, and hence result in current compilations. Still others may involve the analysis of available current data without special compilations. As indicated above, a nation-wide sample survey or special investigation may be considered as an *ad hoc* project, if there are no definite plans to repeat it at stated intervals.

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1. See, for example, the Scottish Mental Survey, carried out in 1947 by the Scottish Council for Research in Education and described by the council in a series of reports: *The Trend of Scottish Intelligence* (Publication No. XXX); *Social Implications of the 1947 Scottish Mental Survey* (Publication No. XXXV); *Educational and Other Aspects of the 1947 Scottish Mental Survey* (Publication No. XLI); *Eleven-year-olds Grow Up* (Publication No. XLII); London, University of London Press, 1949, 1953, 1957, 1958.
2. For types of current educational statistics reported in official publications of 79 countries and territories, see: Unesco, *World Survey of Education: Handbook of Educational Organization and Statistics*, Paris, 1955, Chapter III: The Statistical Reporting of Educational Systems, pp. 50-1.

Uses of educational statistics

It follows from the above that the uses of educational statistics will vary with the different kinds of statistics under consideration and the different problems under study. We may at the outset discard two extreme positions regarding the usefulness of statistics on education. One such position—on the conservative side—holds that all kinds of educational statistics which have ever been collected must have been useful for some purpose, hence they should continue to be collected indefinitely. Particularly in regard to current official statistics on education, there may be the real or imaginary danger of losing the continuity of statistical series established over a long period of time. Yet the continued usefulness of long-established statistical series certainly needs to be examined from time to time, in order to make room for other types of data for which the need may become more apparent or urgent as time goes by. The other extreme position—on the radical side—holds that statistics are only useful if they serve an immediate need in connexion with some problem under study or investigation. Thus all compilations would be on an *ad hoc* basis, and there would be no need whatever for established statistical series. It would surely be unfortunate if one could not count on some continuity in the compilation of certain basic statistics relating to schools, pupils, teachers and expenditure on education, which could provide necessary information on past and present trends in the educational development of a country. There is a middle ground between these extreme positions, where different types of educational statistics are recognized for their short-term or long-term usefulness, and assigned their appropriate places in a system of national statistics. In this connexion, it would be useful—in fact essential—to consider, in the light of national experiences and requirements, what types of educational statistics should be collected and compiled, which of them on a regular continuing basis and which of them from time to time as need arises.

In general terms, educational statistics may be considered as serving the following principal functions:

1. They present a concrete summary picture of the educational conditions at a given time, in so far as such conditions can be described in numerical or quantitative terms.
2. They show the relationships between different aspects of the educational situation at a given time, thus bringing to light any anomalous condition which requires special attention.
3. Over a period of time they trace the lines of educational development

in terms of changes which have occurred, and the directions and rates of such changes.

4. On the basis of past trends and present conditions, they suggest the probable directions and rates of changes in the future development of education.
5. Taken in conjunction with statistics from other fields, such as demographic and economic statistics, they provide a basis for measuring the level of living and of social development in a given country or community.
6. In the light of national or local requirements and aspirations, they serve as the foundation and framework for educational planning and policy-making.
7. Once educational plans and policies are determined, they make it possible to measure periodically the realization of plans and policies in precise terms.
8. When comparable statistics are gathered for different countries or different educational systems, they throw light on the differential development of countries in regard to education and on the respective merits of different educational systems as shown by measurable results.

Thus it is clear that educational statistics are not merely the incidental by-product of school administration, but they are indeed one of the principal means for the maintenance and improvement of all educational systems. As such they are indispensable to the administrator, the teacher, the parents and the public in general, who are concerned with the development of education and the welfare of their own country or community.

Agencies responsible for educational statistics

Who, then, should be responsible for the collection, compilation, analysis and presentation of educational statistics? The answer is, in principle, all those who are concerned with the planning, administration and improvement of education in a given country or community. This means, first of all, the national, provincial and local educational authorities with their administrative, supervisory and teaching personnel—from the Minister of Education down to the classroom teacher. Secondly, other government agencies responsible for planning or administration involving educational matters—for example, national planning commissions, ministries of finance, other ministries concerned with education in special fields such as agriculture, health, labour, etc., central statistical offices which are responsible for all official statistics, national census bureaux which are responsible for all census activities, and other bodies which are constituted permanently or temporarily with some responsibility for educational matters. Thirdly, where education is not exclusively administered by government agencies, those national or local non-governmental bodies which are responsible for different types of education, such as private schools, religious schools, autonomous universities, etc. Finally, all agencies or organizations concerned with educational research and information, such as national councils of educational research, government and non-governmental bureaux of educational research, teachers' professional associations, and public information offices of various kinds.

The variety of ways in which educational statistics are handled in different countries may be shown by the following examples based on information available to the Unesco Secretariat. They are not intended to cover all possible ways of organizing educational statistics in a given country, nor to show the respective advantages and disadvantages of different systems of organization. In fact, each country or community must consider what forms of organization will produce most efficiently the kinds of educational statistics necessary to meet its own special needs and conditions.

In Australia the functions of government are divided between the Commonwealth Government and the governments of the six constituent states. Public education is primarily a State government responsibility, though the Commonwealth Government has been brought more and more into the field. The Commonwealth Office of Education, established by the Education Act of 1945, has among its functions the undertaking of educational research and the provision of statistics and information relating to education required by any Commonwealth authority. Each State has its own Department of Education which administers all public education within the State and in certain territories where it acts as agents of the Commonwealth by special arrangement. Private schools are administered by their own councils set up by various religious bodies, and are not the responsibility of government.

The principal source of current statistics on primary and secondary schools are the annual reports of the State education departments. These are summarized for Australia as a whole and published by the Commonwealth Office of Education. Statistics relating to higher education are compiled and published by the Commonwealth Bureau of Census and Statistics, and also, concerning certain aspects of higher education, by the Universities Commission. Summary tables on education at all levels are published by the Commonwealth Bureau of Census and Statistics in the chapter dealing with education in the *Year Book of the Commonwealth of Australia*. Special studies involving statistical data relating to education are published by the Commonwealth Office of Education[1] and by the Australian Council for Educational Research.[2] In recent years, the Commonwealth Office of Education, with the co-operation of the Australian Council for Educational Research and the State departments of education, has initiated measures designed to achieve some uniformity of statistics compiled by the different States. In July 1947, a sub-committee of the Conference of Directors of Education presented to the Directors' Conference a series of recommendations to this end, based on a preliminary study made by the Australian Council for Educational Research.[3]

Brazil is a federal republic consisting of 20 States, a Federal District, and five territories administered by the Federal Government. Although the Constitution gives each State full autonomy in organizing its own system of education, in practice the State governments are principally responsible for primary education and the training of primary school teachers, while the Federal Government through its Ministry of Education and Culture and a number of other ministries, administers almost all secondary, vocational and higher education. Current statistics on primary education are compiled by State departments of education or by education sections in the State departments of statistics. Complete summaries are supplied annually by these agencies to the Ministry of Education and Culture, which collects statistics from other types of educational and cultural institutions in the country with the help of its eight regional education offices. The Statistical Service of the Ministry in turn supplies national data on education for publication in the *Statistical Yearbook* of the Brazilian Institute of Geography and Statistics. In addition, the Ministry itself publishes a yearbook of education and various statistical reports on different aspects of education. Educational data from population censuses are compiled, analysed and published by the Brazilian Institute of Geography and Statistics. Research studies on education are conducted and published by the National Institute of Pedagogic Studies, which in 1955 established a national and five regional research centres, with the co-operation of Brazilian and foreign sociologists.

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[1] For example: *Salaries of Teachers and Other Educationists employed by State Education Departments in Australia* (Bulletin No. 19), January 1952, June 1955; *Predictions of Enrolments at Australian Universities, 1956-62* (Research Report No. 10), July 1956; *Predictions of School Enrolments* (Research Report No. 11), revised January 1957.

[2] For example: *Some Activities of Australian Adolescents*, Vol. I: *The Educational Activities of Victorian Adolescents*, June 1958; Vol. II: *The Occupational Activities of Australian Adolescents*, July 1958.

[3] *Comments and Suggestions on Educational Statistics compiled by Education Departments in Australia*, February 1940, revised April 1947 (processed).

Canada also has a federal form of government, and responsibility for the organization and administration of public education rests mainly with each of the ten provincial governments, except for the education of Indians, Eskimos, members of the armed forces, and persons in penitentiaries. The provincial departments of education in turn delegate authority to local school boards, which are the basic reporting units for school statistics. There is usually some officer in each provincial education department responsible for the compilation of statistics. However, the overall responsibility for the production of national statistics on education rests with the Education Division of the Dominion Bureau of Statistics. Improvement in the uniformity of statistical reporting is sought through a series of national conferences on education statistics held in 1920, 1936, 1942, 1952, 1955 and 1959. Following the 1942 conference, the Bureau published two manuals, each containing a standard set of report forms accompanied by detailed instructions.[1] The 1952 conference adopted revised forms and approved a series of resolutions and recommendations concerning additional statistical data to be collected by provincial departments of education. The conference of 1955 was devoted exclusively to statistics of higher education.[2] The 1959 conference, concerned with educational statistics other than finance, introduced recommendations which were designed to ensure greater comparability, more complete coverage and more current statistics during the next few years. Among the governmental and non-governmental agencies concerned with educational research, sometimes involving the collection and analysis of statistics, the following may be mentioned:[3] university faculties of education including the Bureau of Educational Research, University of Toronto; the Institute of Child Study, University of Toronto; and

[1] Canada, Dominion Bureau of Statistics, *Manual of School Secretary-treasurers: to Assist in Completing Financial Statements; Manual for Principals and Teachers: to Assist in Completing Statements of School Statistics other than Financial;* Ottawa, 1944 (out of print).

[2] Canada, Dominion Bureau of Statistics, *Report on Conference on Statistics of Higher Education, 1955*. Ottawa, 1956.

[3] For a description of the research activities of these organizations, see: W. C. Radford, *A General Survey of Educational Research in the United States of America, Canada, England and Scotland*. Melbourne, Australian Council for Educational Research, 1955.

professional associations such as the Canadian Education Association and the Canadian Teachers' Federation.

In France, although the administration of public education is highly centralized under the Ministry of National Education through its central, regional (17 *académies*) and county (*département*) organizations, there are also a considerable number of private schools and various special types of schools belonging to other branches of government. Current statistics, relating mainly to primary and higher education, are compiled annually by the Bureau Universitaire de Statistique et de Documentation Scolaire et Professionnelle, which is attached to the National Centre of Educational Documentation. Statistics of general secondary education are compiled by the Service de Statistique Scolaire, directly under the Ministry of National Education. Statistics relating to technical (vocational) education are compiled by the Centre d'Etudes et de Recherches Documentaires de l'Enseignement Technique, also under the Ministry. However, all current educational statistics are now published by the Ministry in a series of statistical supplements to the *Bulletin Officiel de l'Education Nationale*. Educational data from population censuses are compiled and published by the National Institute of Statistics and Economic Studies. In addition, the National Institute of Demographic Studies is engaged in research studies often involving census and current statistics relating to education. Finally, research involving the analysis of educational statistics is also undertaken by the Commission de l'Equipement Scolaire, Universitaire et Sportif under the National Planning Commission.[1]

Education in India is under the direct control of the 29 States, each having an elected minister responsible to the State legislature. Apart from planning, guiding and co-ordinating educational reconstruction, the Government of India has no direct part in the educational development of the States. However, the Central Government is directly responsible for administering education in the Union Territories. The universities are autonomous bodies and control higher education within their jurisdiction. The Statistical Section of the Ministry of Education and Scientific Research is the national agency responsible for the collection, compilation, analysis and publication of current official statistics relating to education at all levels. The Directors of Public Instruction, who are the heads of the administrative machinery for education in the States, are, together with the university authorities, the main channels through which basic educational information and statistics are collected. The Statistical Section of the Ministry annually collects, on a comprehensive form, statistics from the States covering all levels of education from nursery school to post-graduate education and research. Detailed statistics of higher education are collected on another form, and statistics of centrally administered educational and research institutions on a third form. In addition, *ad hoc* collections are made of statistics on various other items, such as pay scales of teachers, child welfare, delinquent children and juvenile offenders, vocational and technical training centres, libraries, etc. In order to ensure the reliability of educational statistics, the Statistical Section issues comprehensive explanations and detailed instructions with each prescribed questionnaire form. It also conducts short-term in-service training courses for staff members of the State Governments and universities concerned with statistical reporting. Responsibility for census statistics on education rests with the Central Statistical Organization, under the Cabinet Secretariat.

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[1] A brief report concerning the work of the commission in this respect appears in *Population* (quarterly review of the Institut National d'Etudes Démographiques), Vol. 13, No. 2, April-June 1958.

In Japan, the Ministry of Education is the central agency ultimately responsible for the administration of education at all levels, through prefectural and local boards of education and institutions of higher education. Under the present system of statistical reporting, the National Government, through the Statistical Standards Division of the Administrative Management Agency, designates those statistics which directly affect national life and the decision of fundamental government policies. In the field of educational statistics, these 'designated statistics' include: basic school statistics, health of schoolchildren, survey of schoolteachers, demand and supply of teachers, vocational education, school equipment survey, school lunch programme, and survey of social (adult) education. The compilation of these statistics is principally the responsibility of the Statistics Section in the Research Bureau of the Ministry of Education. Other statistics resulting from special surveys, as for example on scholastic attainment of pupils, local educational administration and finance, and education to meet the social needs of the nation, are generally the responsibility of the Research Section in the same Bureau. The Research Bureau, consisting of these two sections, is responsible for the publication of the annual report of the Ministry of Education and other statistical and research studies. All the statistics are collected through the agency of research and/or statistics sections in the local public bodies, namely the prefectures and municipalities, together with their respective boards of education. The national census of population, sometimes including certain types of educational data, is conducted by the Bureau of Statistics in the Office of the Prime Minister. A special sample survey on literacy was carried out in 1948 by a Literacy Investigation Committee under the auspices of the Ministry of Education.

Administrative responsibility for education in Mexico is shared by the Federal Government, the governments of the 28 States and the municipalities. With regard to current statistics on education, an agreement exists between the Ministry of Public Education and the Ministry of Economics whereby the Department of School Statistics in the former Ministry is specifically concerned with the collection of statistics from those public schools directly administered by the Federal Government and from the incorporated private schools, whereas the Central Statistical Office in the latter Ministry is concerned with the collection of statistics from all the State and municipal public schools and also from all other private schools. However, a copy of each questionnaire returned to the Department of School Statistics is always forwarded to the Central Statistical Office, which thus brings together all current educational statistics, for general information within the country and abroad, and for the particular information of the Minister of Education. In those cases where special research studies are undertaken by institutions of higher education in the country, relating to educational problems within their own institutions, the questionnaires have to be approved by the Central Statistical Office. For some time the Central Statistical Office has been working on a project for the use of sampling methods in the study of certain educational problems.

The Commonwealth of Puerto Rico has a Department of Education which administers all public schools below the university level. There are 74 school districts, corresponding roughly to the municipal divisions. The main sources of current school statistics are the school registers which are prepared in the central offices of the Department of Education and distributed to the schools by the district school superintendents. Each classroom teacher is responsible for the keeping of the register, the data are summarized in each school district and forwarded to the Department of Education, where the Division of Educational Research and Statistics prepares the tables for publication in the annual report of the Secretary of Education. Statistics of higher education are compiled by the institutions themselves. Census data on education are collected and tabulated by the United States Bureau of the Census. All these statistics are brought together from the different sources and published in the *Statistical Yearbook of Puerto Rico* by the Bureau of Economics and Statistics of the Puerto Rico Planning Board, under the Office of the Governor. Educational research involving the use of statistics is also undertaken by the Superior Council of Education and the University of Puerto Rico.

In Spain, the Ministry of National Education administers all education (with the exception of certain specialized instructional centres set up by other ministries, such as the Diplomatic School, the Judiciary School, the School of Social Studies and the Institute for the Study of Local Administration) through a system of central, regional and provincial services. The collection, compilation and publication of current educational statistics are the responsibility of the National Institute of Statistics, which has delegations within the Ministry of Education and the provincial governments. Prescribed forms for the reporting of current statistics on education are dispatched by the National Institute of Statistics, through its delegation in the Ministry of Education and through its provincial delegations. The returns are summarized and compiled by the Education Section in the Service of Political (Administrative) Statistics in the National Institute of Statistics. They are published by the Institute in its *Statistical Yearbook* and in its special volumes on educational statistics. Census statistics on education are dealt with by the Demographic Section in the National Institute of Statistics. A Statistical Service in the General Technical Department of the Ministry of Education deals with those statistics on education which are not compiled by the National Institute of Statistics; its main task being the preparation of statistical studies on educational problems.[1] Recently the Government has ordered the adoption of the Unesco Recommendation concerning the International Standardization of Educational Statistics.[2] A Joint Commission of the Ministry of Education and the National Institute of Statistics is now reorganizing the whole system of educational statistics in the light of the Unesco Recommendation. The statistics on primary education have already been modified,[3] and the Commission is studying a project for the compilation of statistics relating to public expenditure on education.

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1. See, for example, the following publications of the Statistical Service: *Problemas de Empleo Profesional de los Graduados Universitarios; Los Estudiantes Extranjeros en los Centros de Enseñanza Superior de España; Aspectos Numéricos de la Enseñanza Superior: Graduados Superiores en Ciencias; Aspirantes a Ingreso en Escuelas Especiales de Ingeniería.*
2. See: *Boletín Oficial del Estado*, year XXIV, No. 135, 6 June 1959, pp. 8116-9.
3. *Boletín Oficial del Estado*, year XXIV, No. 60, 11 March 1959, pp. 3965-8.

In the United Kingdom (England and Wales, Scotland and Northern Ireland), central responsibility for national education lies with the Ministries of Education for England and Wales and for Northern Ireland, and the Scottish Education Department. Local administration is the responsibility of local education authorities or of voluntary organizations. Basic data for current statistics on education are mainly provided by the local education authorities, compiled and published by the three central education departments in their annual reports. However, no figures are available for independent schools except those which are 'recognized as efficient' by the respective Ministry or Department of Education. Universities and university colleges receiving grants direct from the Treasury also lie outside the scope of these annual reports. Statistics relating to these institutions of higher education are compiled and published by the University Grants Committee. Census statistics relating to education are the responsibility of the General Register Office, while statistics on educational finance are derived from various central and local authorities. Statistical data concerning special problems in education are sometimes collected and published by such organizations as the National Union of Teachers, the Association of Assistant Masters and Mistresses, and the National Institute for Adult Education. The application of statistical methods in educational research is well developed in the United Kingdom by research scholars and by various organizations for educational research, notably the Scottish Council for Research in Education and the National Foundation for Educational Research in England and Wales.[1]

In the United States of America, education is considered to be a matter for the control of the individual States. Each State has delegated a large degree of control of its educational programme to the local school districts (of which there are some 40,000 in the whole of the United States) for primary and secondary education, and to special boards governing public higher education. The States grant almost complete freedom to privately supported schools and colleges in the conduct of their educational programmes.

The Office of Education, under the United States Department of Health, Education and Welfare, is a federal agency concerned mainly

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[1] A detailed account of the nature and sources of educational statistics in the United Kingdom is given by Doris M. Lee, in 'The Statistics of Education', first published in the *Journal of the Royal Statistical Society*, Series A (General), Vol. 117, Part III, 1954, p. 348-60, and later included as a chapter in M. G. Kendall (ed.), *The Sources and Nature of the Statistics of the United Kingdom*, Vol. II, published by the Royal Statistical Society, London, Oliver and Boyd, 1957.

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with statistical, informational and advisory services in the field of education. However, it has important responsibilities for the administration of certain federal funds for education, under a series of laws relating to, among other things: (a) construction and operation of schools in areas affected by federal activities; (b) vocational education of less than college grade; (c) 'land-grant colleges'; (d) co-operative research in education; and (e) expansion and improvement of educational programmes to meet critical national needs. Other federal agencies which also administer important financial aids to education include: the Public Health Service, the National Science Foundation, and the Departments of Agriculture, Defense, Interior and State, besides the Veterans Administration and the Atomic Energy Commission.[1]

The Educational Statistics Branch in the Office of Education has as one of its functions the compilation and publication of the *Biennial Survey of Education* and other statistical studies and reports. The statistical data for these surveys and studies are provided by State and city school systems, individual institutions, and other special reporting units. Educational data from population censuses and current population surveys are compiled and published by the Bureau of the Census. Other types of educational statistics are published in the research bulletins of the National Education Association and its various affiliated organizations. Research activities, limited in scope and practical in design, are often combined with the statistical services of State departments of education and some of the city school systems. A larger portion of educational research is conducted in the universities, sometimes through bureaux of educational research; in this research, statistical methods are sometimes tested out in application to educational problems.

With such a large number of official and non-official bodies in the United States engaged in the collection and analysis of statistical information relating to education, it is no wonder that there is a widely-felt need for some national standardization of terminology and procedures in this field. In response to this need, the Office of Education convened a series of national and regional conferences of representatives of State departments of education, national educational associations including non-public school associations, some university professors of education and representatives of the Office of Education. As a result of discussions at the national and regional conferences, the Office of Education has issued two handbooks dealing with uniform terminology and procedures

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1. See: United States Department of Health, Education and Welfare, Office of Education, *Education in the United States of America*, Washington, D.C., 1955; *Federal Funds for Education, 1956-57 and 1957-58*, Washington, D.C., 1959.

in statistical reporting, at the levels of primary and secondary education.[1]

Two other recent developments towards the improvement of educational statistics in the United States may be noted. One is a proposed series of regional conferences of users and suppliers of educational statistics, following a recommendation of the Advisory Committee on Educational Statistics, in 1958, that the Office of Education establish closer working relationships with suppliers and users of its statistics. The other is a provision in the National Defense Education Act of 1958, for federal grants to the States 'to improve and strengthen the adequacy and reliability of educational statistics provided by State and local reports and records and the methods and techniques for collecting and processing educational data and disseminating information about the condition and progress of education in the States'. The purposes of these grants, as specified by Congress, include: '(1) improving the collection, analysis and reporting of statistical data supplied by local educational units; (2) the development of accounting and reporting manuals to serve as guides for local educational units; (3) the conduct of conferences and training for personnel of local educational units and of periodic reviews and evaluation of the programme for records and reports; (4) improving methods for obtaining, from other State agencies within the State, educational data not collected by the State educational agency; or (5) expediting the processing and reporting of statistical data through installation and operation of mechanical equipment'.[2]

In Yugoslavia, a federal country of six autonomous republics, the administration of schools and of educational institutions is based on the principles of social management. The school board is responsible for the direct management of the school. Schools are founded and administered by the people's councils of communes or municipal districts, according to the level of the schools; only in exceptional cases are schools set up by the Government at the federal or republic level. The People's Republic authorities supervise the work of schools situated in their respective territoires, with the exception of schools founded by the Federal Government.

The collection, compilation and publication of current educational statistics are the responsibility of the Federal Institute of Statistics which acts through a system of republic and local statistical services. Forms are prescribed by this institute and despatched through Republic institutes of statistics and local statistical bureaux. The returns are summarized and compiled first by the statistical services of district people's committees for the use of the local authorities (districts and communes), and afterwards by the statistical institutes of People's Republics and by the Federal Institute of Statistics. They are published by the Federal Institute of Statistics in its *Statistical Yearbook* or in its special series of *Statistical Bulletins.* Census statistics on education, as well as special studies on selected topics, are also dealt with by the Federal Institute of Statistics and published in the same series of bulletins.[1]

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[1] United States Department of Health, Education and Welfare, Office of Education *The Common Core of State Educational Information; Financial Accounting for Local and State School Systems*, Washington, D.C., Government Printing Office, 1953, 1957. (*State Educational Records and Reports* series, Handbooks 1 and 2). Two more handbooks planned to be issued in this series will deal respectively with personnel accounting and property accounting.

[2] See: *National Defense Education Act of 1958* (Public Law 85-864, 85th Congress, H.R. 13247, 2 September, 1958).

It may be gathered from the above examples that there is no uniformity in the various national systems for the collection, compilation, analysis and publication of educational statistics. Nor would it be possible, or even appropriate, for an international organization such as Unesco to recommend any standards for the setting up of a national system for educational statistics. It is, however, possible for Unesco to provide technical advice and assistance in this matter for those governments which specifically request such assistance.[2]

1. See, for example: annual statistics on primary and secondary schools (Bulletin Nos. 26, 43, 49, 72, 82, 103, 118, 122, . . .), on higher education (Nos. 20, 50, 59, 94, 120, . . .) on pupil examinations and promotions (Nos. 27, 39, . . .), and census of school buildings (No. 36).
2. Advisory missions on educational statistics have been sent by Unesco in recent years to Iran, Iraq, Lebanon, Pakistan, Sudan, United Arab Republic (Syria), and to certain Latin American countries in connexion with the Major Project on the Extension of Primary Education in Latin America.

II. *International comparability of educational statistics*

Lack of international comparability

In the previous chapter, we have briefly discussed the nature and sources of educational statistics, giving a number of examples concerning the situation in different countries. We have also suggested some of the ways in which educational statistics are useful for the understanding of the trends of educational development in particular countries. But before any international comparisons can be made of the development of education in different countries, it is necessary that the basic statistics on education be collected and compiled in a sufficiently uniform manner. This is far from being the case, as any student in comparative education will point out. In the nature of the case, national statistics on education must be based on the characteristics and traditions of the educational system or systems of each country, and there are hardly two countries where the educational systems are built on identical patterns. In fact, as has been shown by the examples given in the previous chapter, there are many countries which have several different systems of education in force within their own boundaries, and serious efforts have to be made to improve the comparability of educational statistics provided by the different authorities. This difficulty is multiplied many times at the international level, when 'national' statistics are brought together from 200 or more countries and territories, as is done in the *World Survey of Education* published every three or four years by Unesco. Doubtless there are critics who would point to the lack of comparability of national statistics thus confronted in an international compilation, and question the value of any such undertaking. On the other hand, the favourable manner in which these attempts have been regarded by the educational world, including the government authorities of the Member States of

Unesco, would indicate that they fill a real need and help to bring about better mutual understanding and appreciation of the tremendous efforts and substantial progress in education which are being made in every country of the world. It remains, therefore, for the educational administrators and statisticians concerned to combine their resources, to exercise their ingenuity, and to take determined steps to bring about an improvement in the international comparability of educational statistics, always of course with due respect for the national systems of education with all their different characteristics and traditions.

International action towards standardization

Before Unesco came into existence, the problem of standardization in the field of educational statistics was taken up, in 1926, by a joint committee of the International Institute of Intellectual Co-operation and the International Statistical Institute. This committee, under the chairmanship of Mr. Lucien March (France), recommended a programme for the international compilation of educational and cultural statistics.[1] Since the committee's report—which existed only in French—has long been out of print, we reproduce below the gist of that part which related to statistics of education proper, leaving out the extensive treatment also given in the report to statistics of non-university scientific institutions, museums, libraries, archives, historical and artistic monuments, book production, theatres, concerts, cinema, radio broadcasting, public and private subventions, scientific inventions, and censuses of the liberal professions.

While recognizing the difficulties, in many countries, of collecting precise information on private educational institutions, the committee recommended the collection and tabulation, as far as possible, of all data on both public and private institutions. It recognized the classification of educational institutions in three levels—higher, secondary or middle, primary or elementary—and suggested a distinction between those institutions giving a general education and those giving a vocational or technical education. It also called for detailed information, to precede the tables, concerning the organization, administration, and inspection of schools, legislation regarding compulsory education, qualification of teachers, the duration of courses, etc. The following tables were recommended by the committee for each level and type of education:

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1. *Rapport au nom de la Commission Mixte de la Statistique Intellectuelle*, by Lucien March (President). Cairo, Government Press, 1928 (out of print).

A. *General higher education.* Detailed information on the organization of higher education, on universities and institutions independent of universities, etc. Tables for each category of higher education, by principal territorial divisions or by institutions of higher education:

1. An annual list of courses by subject, with details concerning number of hours of lectures, etc.
2. Annual number of students enrolled, classified by sex, by nationality, and by the nature of diploma or certificate course for which the students are enrolled.
3. Every five years, the number of professors, classified by sex and by category, distinguishing between national and foreign professors.
4. Every five years, the number of students benefiting from scholarship grants or exemption of fees, distinguishing between national and foreign students.
5. Annual number of students admitted to specialized advanced studies or laboratory work.
6. Every five years, the number of laboratories and workshops, with numbers of scientific and auxiliary staff, and student capacity.
7. Every five years, the number of university libraries, with numbers of books, pamphlets, periodicals, etc., annual number of readers, number of books consulted, etc., number of staff classified by permanent and temporary staff and by scientific and auxiliary staff.
8. Annual number of students receiving diplomas or certificates, classified by type of diploma or certificate.
9. Every five years, the average number of professors exchanged or sent on missions, expense per person, and average annual number of students exchanged or sent on missions, expense per student.
10. Every five years, numbers of student and alumni associations, with numbers of members, also number of student meeting places or residence halls and their capacity.
11. Annual number of schools or departments preparing secondary school teachers, with numbers of professors and of students, by sex and distinguishing between national and foreign.
12. Annual number of institutions affiliated to universities, with numbers of professors and of students.
13. Every five years, a list of university foundations with amount of total endowment or annual income, nationality of donor, university to which it is attached, and seat of the foundation (whether in the country or abroad).
14. Annual income and expenditure of institutions or groups of insti-

tutions, classified by ordinary and extraordinary receipts and expenses, and by sources of income and chief items of expenditure.

B. *General secondary education.* Information concerning the organization of secondary education, the different types of institutions, list of courses, progression of classes, length of courses, age at entrance to secondary schools, and conditions of admission to higher education. In addition, for each territorial division:

15. Annual number of institutions, given separately for boys, for girls, and for mixed institutions, number of students, distinguishing between national and foreign, between resident and non-resident, number of students receiving scholarships or exemption of fees, number of students who passed final examinations and number of those who obtained diplomas permitting admission to higher education, number of teachers by sex and by category of status.
16. Every five years, for all types of institutions, the number of pupils in each class or grade at the beginning of the period, by sex, with the number of repeaters if possible, also the numbers of classes with 10 or less pupils, 11-30 pupils, 31-100 pupils, over 100 pupils.
17. Every five years, the number of schools in the whole country, with numbers of pupils at the beginning of the period, resident and non-resident, and by nationality, numbers benefiting from scholarships or from exemption of fees, numbers passing final examinations with admission and without admission to higher education, and numbers of teachers by sex and by nationality.
18. Every five years, for each category of institution, total income and expenditure, ordinary and extraordinary, classified by sources of income and chief items of expenditure.

C. *Schools and courses for primary school teachers.* Information on the conditions of recruitment and methods of training of teachers, whether by special schools or otherwise, together with tables showing:

19. Annual number of teacher training schools, giving separately those for the training of young men and young women, with number of students, distinguishing between national and foreign, number of recipients of scholarships, and number of teachers by sex.
20. Every five years, number of special training courses for primary school teachers, classified by type of courses, with numbers of students and teachers by sex, and number of students passing final examinations.

D. *Primary education.* Information on legislation relating to primary education, compulsory schooling age limits, etc., organization of schools of different levels (infant schools, primary schools proper, higher primary schools), together with tables showing:

21. Annual number of infant or maternal schools, with numbers of teachers and pupils, by sex, and number of pupils leaving school, classified according to whether they can or cannot read and write.
22. Annual numbers of primary schools for boys, for girls, and mixed schools, classified according to whether with or without manual instruction. Numbers of pupils enrolled in the schools, by sex, numbers of pupils attending school at the time of maximum attendance, numbers of pupils attending school on a given day in the winter and in the summer, and number of pupils passing final examinations.
23. Every five years, the number of school principals and the numbers of teachers, by sex, of those graduated from normal schools, of those with and without certificates for teaching in a primary school, and of those teaching in boys' schools, in girls' schools, and in mixed schools, and also of those who belong to a religious order.
24. Every five years, the numbers of schools having 1 class only, 2-4 classes, more than 4 classes; having 10 or less pupils, 11-50 pupils, 51-200 pupils, more than 200 pupils; numbers of classes having 10 or less pupils, 11-30 pupils, 31-60 pupils, more than 60 pupils; with numbers of schools having open-air classes and having a section for abnormal or mentally retarded pupils.
25. Every five years, number of schools possessing a school library, of those possessing materials for scientific demonstrations and of those having health examinations, together with numbers of pupils of each sex in these schools.
26. Every five years, numbers of special types of primary or elementary schools (regimental schools, prison schools, immigrant schools, reform schools, special schools for abnormal children, schools for children of parents without fixed residence, such as boatmen and migrants), with numbers of pupils and numbers of teachers with and without certificates for teaching in ordinary primary schools.
27. Annual numbers of higher primary schools, giving separately those with and without specialized instruction, with numbers of years of study, numbers of classes, numbers of teachers of each sex, and numbers of pupils passing final examinations.
28. Every five years, population of school age corresponding to age

limits of primary schools, by sex, number of persons of either sex aged 20-49 at the time of the last census, number of such persons who can both read and write: numbers of military conscripts whose literacy status is known, and number of those who can read and write; also number of newly married persons, and number of those who can sign their marriage certificates.

29. Every five years, total income, ordinary and extraordinary, for primary education, by source of income, and total expenditure for maintenance of buildings and supplies, for salaries of teaching and other staff, and for scholarships and other expenses.
30. Every five years, number of special school funds (for free books, food, clothing, etc. supplied to pupils), with number of pupils of each sex benefiting from these funds, and total amounts spent during the year; number of school savings banks, with number of participants and total amount of deposits during the year; number of school mutual-aid funds, with number of participants and number of cases aided, and total expenditure for the year; also other auxiliary institutions of a similar nature.
31. Every five years, number of continuation courses at the primary level, by day and night courses, with number of teachers, number of regular pupils in attendance, and number of certificates awarded; also apprenticeship and other special courses, with number of pupils.

E. *General education for adults.*

32. Number of people's universities and university extension centres, with number of persons of each sex attending such centres, and number of teachers, lecturers, etc.
33. Number of institutions offering correspondence courses, with number of persons of each sex taking the courses, and number of teachers.

F. *Specialized education* (at two levels—higher and ordinary—by type of school and nature of education). Information on the organization, objectives and programmes of the higher schools; giving the following details for the country as a whole, and, in the case of the other schools, for each territorial division:

34. Annual list of institutions of higher agricultural education, with number of years of study, numbers of teachers with and without special certificates, numbers of students in each year of study, total numbers of national and foreign students, number of diplomas given, and numbers of students holding scholarships and exempted from fees.

35. Annual number of all types of elementary or secondary schools of agriculture, with number of years of study in each type of school, numbers of teachers with and without special certificates, number of pupils, number of certificates and diplomas given, etc.
36. Every five years, number of regional agricultural teachers, numbers of lectures given, and number of localities where lectures are given, also number of itinerant agricultural schools, with number of teachers, number of courses given and number of localities where such courses are given.
37. Annual list of higher technical, industrial or commercial schools, with number of years of study, number of teachers, number of students, number of certificates and diplomas given, etc.
38. Annual number of elementary or secondary technical, industrial or commercial schools, numbers of teachers with and without special certificates, number of pupils, and number of pupils holding scholarships and exempted from fees.
39. Annual list of schools for public administration (postal service, telecommunications, police, archives, libraries, etc.), with number of years of study in each school, numbers of teachers and students, and numbers of students holding scholarships.
40. Annual list of military schools (for the training of officers, junior officers, etc., in the army, navy, air force, etc.), with numbers of years of study, total number of teachers and of students, and numbers of students holding scholarships.
41. Annual list of higher schools of fine arts, with numbers of years of study, number of teachers of each sex, numbers of national and foreign students of each sex, and numbers of students holding scholarships, etc.
42. Annual numbers of elementary or secondary schools of fine arts, by category of school, with numbers of years of study, number of teachers, number of pupils, etc.
43. Annual number of schools for social or philanthropic services (nurses, social workers, etc.), by category, with number of years of study, numbers of national and foreign teachers, numbers of national and foreign students, numbers of students holding scholarships, etc.
44. Annual list of higher schools of religious education (exclusively for the recruitment of the clergy), and annual number of such schools at other levels, with numbers of years of study, numbers of national and foreign teachers, numbers of national and foreign students, number of students holding scholarships, and number of students leaving the school to enter the Church.

The report of this committee was approved by the General Assembly of the International Statistical Institute on 4 January 1928, with a resolution calling on the different countries to compile and publish the statistics as required in the report, according to the recommended table forms, referring to the period 1926-30, or to a suitable period as close as possible to the latest census, and asking for a compilation of information already published, concerning definitions, laws and administrative regulations, in order to facilitate international comparisons which were to be based on statistics to be collected in the various countries not later than 1930. This comprehensive but ambitious proposal was never realized, though the work of the joint committee did lay a foundation for later, more modest efforts on the part of international bodies interested in the same general programme.

A considerably reduced outline of essential statistics relating to higher education was proposed in 1935 by Professor Vincenzo Castrilli, of the International Institute of Intellectual Co-operation.[1] After examining the statistics on higher education available from seven European countries, Professor Castrilli proposed the following basic elements for international collection of statistics on university education:

1. Number of students: (a) By categories according to the organization of universities in the respective countries (for example, in Great Britain, by full-time and part-time students). (b) By sex. (c) By nationality, i.e., nationals, colonials, and foreigners, for the total number of university students and, where appropriate, for each type of institution. (d) By the nature of the diploma course for which the students are enrolled (for example, in France, State diplomas—*licence*, *doctorat*, etc.—and university diplomas—*doctorat d'université*, *diplômes* and *certificats*).
2. Number of diplomas awarded, by type of diploma, and by sex and nationality of the candidates. These statistics, which should be given by faculties, as in the case of number of students, should refer to the whole calendar year. Further, for certain countries, the number of diplomas awarded by the State permitting the exercise of certain professions should also be added.
3. Number of professors, readers, assistants, etc., by categories sufficiently precise and detailed to distinguish in particular, by faculties, the staff who do the actual teaching from those who give practical instruction.

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[1] 'La Statistique Universitaire', in: *l'Organisation de l'Enseignement Supérieur*, Vol. I, Paris, 1936, pp. 301-30.

4. Data regarding the ordinary and extraordinary budgets for higher education, sufficiently detailed to distinguish between such essential categories of income as grants from public authorities, grants from private sources, interest on endowments and investments, tuition and examination fees; and categories of expenditure such as salaries of professors and assistants, salaries of administrative staff, maintenance of buildings and supplies and other administrative expenses, maintenance of laboratories, libraries and museums, grants for scholarships and for other types of assistance to students.

In May 1946, the United States of America submitted to the Preparatory Commission of Unesco two proposals, one of which concerned the setting up of an international service of educational statistics. The Preparatory Commission, in proposing the appointment of a committee on educational statistics, specified that this committee 'should resume the work started in this field before the war and collaborate closely with the Statistical Commission of the United Nations'.[1] This proposal was adopted by the General Conference of Unesco at its first session. Thus the programme of Unesco for 1947, as approved by the Executive Board at its second session, contained the following project under the section on education:

'2. *Educational statistics.* In collaboration with a committee on educational statistics the following activities will be carried on: (a) Assist in the co-ordination, standardization and improvement of national educational statistics. (b) Assist in the standardization of educational terminology. (c) Advise Member States and intergovernmental organizations on general questions relating to the collection, interpretation and dissemination of statistical data on education. (d) Explore the possibility of publishing an international education yearbook, which should contain information on educational policies and trends as well as statistics.'[2]

With the establishment of a Statistical Service in the Secretariat in 1950, the Unesco programme of international statistics on education began to take shape. Attention was focused on the problems of international comparability of educational statistics. An Expert Committee on Standardization of Educational Statistics met in November 1951, under the chairmanship of Professor P. J. Idenburg (Netherlands), and proposed a minimum set of definitions, classifications and tabulations of statistics on illiteracy and education. The report of this committee,[1] and a working paper prepared by the Secretariat,[2] were sent to all Member States for comments. The subject was also presented by Unesco for discussion at the twenty-eighth session of the International Statistical Institute (Rome, 1953), the eighth session of the United Nations Statistical Commission (Geneva, 1954), and the Third Inter-American Statistical Conference (Petropolis, Brazil, 1955).

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[1] *Report on the Programme of the United Nations Educational, Scientific and Cultural Organization*, by the Preparatory Commission of Unesco, Paris, 1946, p. 46.

[2] Unesco, *General Conference, first session*, Paris, 1947, p. 273.

In the light of comments received from Member States and consultations with international organizations, the Director-General presented two interim reports to the General Conference of Unesco, at its seventh and eighth sessions (Paris, 1952, and Montevideo, 1954).[3] Later, the question of international regulation with a view to standardizing educational statistics was put to the General Conference at its ninth session (New Delhi, December 1956), which adopted the following resolution (3.33):

'The General Conference,

'Having examined the report by the Director-General on the standardization of educational statistics through the adoption of international regulations (document 9C/PRG/4),

'Considers it desirable that international regulations be drawn up for the standardization of educational statistics,

'Decides that such international regulations should cover the questions dealt with in the above-mentioned report by the Director-General, and should take the form of a recommendation to Member States, in the sense of Article IV, paragraph 4, of the Constitution;

'Authorizes the Director-General to convene a Committee composed of technicians and experts nominated by Member States to prepare a draft recommendation for submission to the General Conference at its tenth session'.[4]

After the adoption of this resolution, and in accordance with the Rules of Procedure concerning Recommendations to Member States and International Conventions, the Director-General prepared a preliminary report,[1] setting forth the character and purpose of the recommendation concerning international standardization of educational statistics, together with the preliminary text of a draft recommendation, and requested comments thereon from the Member States.

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[1] *Report of the Expert Committee on Standardization of Educational Statistics* (doc. Unesco/ST/R/4 rev.), Paris, April 1952.

[2] *Definitions, classifications and tabulations in statistics on education* (doc. Unesco/ST/R/6), Paris, April 1952.

[3] *Standardization of Educational Statistics* (doc. Unesco/7C/PRG/4), Paris, November 1952; *Standardization of Educational Statistics: Preliminary Study of the Technical and Legal Aspects* (doc. Unesco/8C/PRG/2), Paris, July 1954.

[4] *Resolutions adopted by the General Conference at its Ninth Session* (doc. Unesco/9 C/Resolutions), Paris 1957, p. 19.

Meanwhile, a regional seminar on educational statistics for South Asia and the Far East was held at Bangkok (November 1957), where the question of international standardization was discussed in detail, on the basis of the preliminary draft recommendation.[2]

A final report[3] on this subject, following the receipt of comments from Member States on the preliminary report mentioned above, was presented to a Special Inter-governmental Committee which was convened in Paris (June 1958) to prepare a final draft recommendation for submission to the General Conference. The draft recommendation drawn up by this special committee[4] was adopted by the General Conference at its tenth session, in Paris, on 3 December 1958. This brings to a conclusion the first phase of Unesco's programme concerning the international standardization of educational statistics.

Further action needed

The adoption of a recommendation by the General Conference of Unesco commits each Member State, by virtue of Article IV, paragraph 4, of the Constitution, to submitting the recommendation to its competent authorities within a period of one year from the close of the session of the General Conference at which the recommendation was adopted. Furthermore, under Article VIII of the Constitution, each Member State is obliged to report to the Organization 'on the action taken upon the recommendations and conventions referred to in Article IV, paragraph 4.'

It is understood that several of the Member States have already taken appropriate action in this regard. For example, in Spain, the National Institute of Statistics, having received a certified copy of the Recommendation transmitted to it by the Ministry of External Affairs, and

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1. *International Standardization of Educational Statistics: Preliminary Report* (doc. Unesco/ST/R/16), Paris, July 1957.
2. *Regional Seminar for South Asia and the Far East on the International Standardization of Educational Statistics: Final Report* (doc. Unesco/ST/R/20), Paris, May 1958.
3. *International Standardization of Educational Statistics: Final Report of the Director-General* (doc. Unesco/ST/R/16. Add.), Paris, April 1958.
4. *Draft Recommendation concerning the International Standardization of Educational Statistics* (doc. Unesco/10 C/11), Paris, August 1958.

after careful study of the document by its Advisory Committee on Educational Statistics, on which the Ministry of Education was represented, found that the principles and norms formulated in the Recommendation were perfectly applicable in Spain. As a result, the Government has ordered the adoption of this Recommendation and called on the National Institute of Statistics to take the necessary measures to give effect to the international recommendation. Furthermore, the Institute has already developed a project for the reorganization of statistics concerning primary education, in accordance with the norms of the international recommendation. It will also undertake in the near future the reorganization of statistics relating to the other levels of education, including statistics of educational finance contained in Section IV of the Recommendation.

However, the mere adoption of an international recommendation by the competent national authorities is not in itself sufficient to bring about immediate improvement in the international comparability of educational statistics. In the view of the Secretariat of Unesco, further steps are necessary in order to put the Recommendation into effect and to bring about concrete and lasting results. Some of these steps may be, for example:

1. Formation of technical study groups within each country, to examine the applicability of the different sections and articles of the Recommendation, in the light of national needs and conditions.
2. Adoption or adaptation of the particular concepts, definitions and classifications contained in the Recommendation.
3. Establishment of a tabulation programme in educational statistics, suitable to the conditions and needs of the country, if necessary introducing various tables in an order of priority.
4. Conducting research studies regarding additional concepts, definitions, classifications and tabulations of educational statistics which may be needed, in view of national interest and international comparability.
5. Intensified training of technicians dealing with educational statistics at the national, provincial and local levels, in order to improve the quality as well as the quantity of statistics susceptible to international comparisons.
6. Improvement of methods of publishing national statistics on education, so as to increase their usefulness by reducing the time-lag between the initial collection and final publication of data.
7. Making educational statistics more widely available for use by those persons who are engaged in the planning, administration, research,

information, and other aspects of educational development in the country.

8. Participation in international meetings and seminars, on a regional or worldwide basis, for the purpose of improving the availability and comparability of educational statistics. In this connexion, plans have been made by Unesco for a series of regional meetings or seminars on educational statistics to be held in the next few years.[1]

Purpose of the manual

Meanwhile, the present *Manual* has been prepared by the Statistical Division of Unesco to serve as a technical guide for the use of national agencies responsible for the compilation of educational statistics, with a view to improving the international comparability of such statistics. A draft manual[2] was circulated earlier to Member States, the main purpose of which was to explain the draft recommendation on standardization which was being submitted to them for consideration. In its report, the Special Committee which prepared the final draft recommendation for adoption by the General Conference emphasized the necessity of a manual of this kind as a companion to the Recommendation and specified that it 'should provide examples of application and other helpful amplification, with particular attention to special statistical situations or problems in the various States'.[3]

In the following chapters we shall discuss the various concepts, definitions, classifications and tabulations relating to: statistics of illiteracy, statistics on the educational attainment of the population, statistics of educational institutions, and statistics of educational finance. We shall refer to examples from different countries, which may or may not have difficulty in applying the standards proposed in the Recommendation. Whenever possible, we shall give particular attention to special statistical situations or problems which are known to exist in some countries. The examples are merely illustrative, since it would be impossible to give an exhaustive account. They are taken mainly from national statistical publications available to the Unesco

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[1] A regional seminar for Africa on the international standardization of educational statistics was held at Khartoum in November 1959. It was attended by 29 participants and observers representing 16 Member States and 4 international organizations. See: *Report of the Regional Seminar for Africa on the International Standardization of Educational Statistics* (doc. Unesco/SS/29), Paris, March 1960.

[2] *Draft Manual of Educational Statistics* (doc. Unesco/ST/R/17), Paris, September 1957.

[3] Doc. Unesco/10 C/11, p. 15, Annex II, paragraph 22.

Secretariat, contributions by Unesco National Commissions and other bodies to the *World Survey of Education*, answers to statistical questionnaires sent out by Unesco, and comments of national authorities on the various drafts of the Unesco Recommendation concerning the standardization of educational statistics.

The text of the Recommendation adopted by the General Conference of Unesco is reproduced in the Appendix.

III. *Statistics of illiteracy*[1]

Basic concepts and definitions

A society which possesses a written language may be called a 'literate' society, while another which has not developed a written language may be called a 'non-literate' or 'pre-literate' society. Similarly, an individual who possesses the ability of communicating with his fellows by means of written language is regarded as a 'literate' person, and one who does not have this ability is considered an 'illiterate'. Communication by means of written language consists of two elements: writing and reading. Both elements are essential for communication at a satisfactory level. Hence a person who can only write but not read, or read but not write, may be called a 'partially literate' or 'semi-literate' person.

However, we should also consider the amount or degree of a person's ability to read and write. At the lowest level, he may be able only to write some numerals, like '1, 2, 3, . . .' or to sign his own name. Or he may be able to recognize his own name in writing, or to decipher a few simple words, like 'yes, no, boy, girl, . . .' but nothing more. Such a person may be considered as 'literate', but only at the minimum level. We might perhaps require a literate person to be able both to read and to write fluently, with perfect understanding, not only so many words and symbols but also a complete passage of literature. In that case, many who could qualify as 'literates' at the minimum level must be considered as 'illiterate' or 'partially literate', at the higher level of requirement.

Thus there is a whole range of reading and writing abilities extending from zero, or below the absolute minimum level, to an undetermined maximum. For practical purposes, we may adopt two sets of definitions corresponding to two different levels of ability, namely, the relative minimum level and the 'functional' level.

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[1] For a general discussion of methodology relating to statistics of illiteracy, see: Unesco, *World Illiteracy at Mid-century*, Paris, 1957, chapters I and II.

At the relative minimum level, literacy may be defined, simply but vaguely, as the 'ability to read and write'. This is the criterion commonly used in census taking. The census schedule would have one or more questions such as: Can you read? Can you write? Can you read and write? The answers—'yes' or 'no'—are noted by the enumerators, who are sometimes given supplementary instructions to make the questions a little more precise. For example, in the 1947 Census of Argentina, the enumerators were instructed to return 'no' for persons who could only write numerals or sign their names. In the censuses of India, 1911, 1921 and 1931, the enumerators had instructions that only those persons were to be considered literate who could write a letter to a friend and read the answer to it. In the Census of Egypt, 1917, the instructions were to state 'whether the enumerated person is able to read fluently a printed paper in some one language' and 'whether the enumerated person is able to write by himself or from dictation a short letter in some one language'. Similarly, in the 1946 Census of Ceylon, the instructions stated: 'Enter . . . the language of the race to which his father belongs under each person who can read and write it. . . . The test of ability to read and write should be whether the person is able to write a short letter and read the reply to it.'[1]

It may sometimes be important, as in the above example from the Census of Ceylon, to specify the language which the person can read and write. However, in most countries nowadays the census question on literacy usually relates to reading and writing ability in any language—that is to say, in any one language, no matter which. Since the category of semi-literates, referring to those who can only read but not write, or write but not read, is rarely meaningful, and usually concerns a very small number of persons, it should be sufficient, for purposes of international comparison, to distinguish only between those who can both read and write, at a specified level, and those who cannot. Hence the Recommendation adopted by the General Conference of Unesco contains only the following two definitions:

> '*A person is literate who can with understanding both read and write a short simple statement on his everyday life.*'

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[1] For a list of census questions on literacy, with instructions to enumerators, used in 26 countries at various censuses taken between 1900 and 1948, see: Unesco, *Progress of Literacy in Various Countries*, Paris, 1953, pp. 13-17.

> '*A person is illiterate who cannot with understanding both read and write a short simple statement on his everyday life.*'

It may be noted that the recommended definitions contain no reference to language. Where information is specifically desired on the language which a literate person can read and write, this can be obtained by formulating the census question or questions in an appropriate way, for example: Is the person literate in the national language (or his mother tongue)? Is the person literate in English (or any other language to be specified)? This was in fact done in several of the censuses where the language factor in literacy was considered important. Thus, in the Census of Malaya, 1947, separate questions were asked and separate tables were compiled, on literacy in English and literacy in Malay, for the total population of Malaya and for each of the ethnic groups except Europeans and Eurasians.[1] Similarly, in the 1952 Census of Mauritius, distinction was made between literacy in any European language and literacy in any non-European language.[2] The principal European languages used by the population of Mauritius are French and English; the principal non-European languages are Hindi and Creole, with relatively small numbers of people who speak Urdu, Tamil, Chinese, etc.

Another aspect of the recommended definitions needs comment, namely concerning the specified degree of reading and writing ability. The effect of these definitions is to discourage the practice, sometimes found in national censuses, of recording a person as 'literate' simply because he has attended school for some brief period, or knows how to sign his name and read some numerals. Such persons should be considered 'illiterate', according to these definitions, unless they show evidence of a higher degree of ability as implied by the definitions. It is, of course, hardly practicable in a census operation for each individual to be given an actual test in reading and writing. In most instances, if not always, the word of the respondent must be accepted. But these definitions could help the enumerator to avoid recording as literate a person whose ability is obviously below the level specified.

Where statistics of illiteracy are to be derived from a sample survey involving a limited number of persons, it may be quite feasible, and desirable, to give each individual a test in reading and writing. This was actually done, for example, in Japan,[1] the Philippines,[2] the United Kingdom,[3] and Yugoslavia.[4]

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[1] Malaya, *A Report on the 1947 Census of Population*, by M. V. Del Tufo, London, Crown Agents for the Colonies, 1949.

[2] Mauritius, Central Statistical Office, *Census 1952 of Mauritius and its Dependencies*, Part II. Port Louis, Government Printer, 1953.

Some people may object that the level of literacy implied by the recommendations is not high enough. They would prefer to have a definition covering the concept of 'functional literacy', such as the following: 'A person is functionally literate when he has acquired the knowledge and skills in reading and writing which enable him to engage effectively in all those activities in which literacy is normally assumed in his culture or group.'[5]

The Philippines study mentioned above adopted a definition of 'functional literacy' as the ability: (a) to read and interpret satisfactorily reading matter such as would appear in (i) ordinary letters, (ii) newspapers, (iii) notices and signs, (iv) advertisements, and (v) tax receipts; (b) to write an ordinary letter; (c) to make computations with the four fundamental operations and solve problems of day-to-day living. The committee reached the conclusion that 'with the present system of elementary education, about seven years are necessary to make a learner functionally literate for useful citizenship. . . . If the quality of instruction is improved . . . it might be possible to shorten the period needed by the learner to attain functional literacy'.

A committee appointed in 1922 by the Board of Regents of the University of the State of New York to devise a literacy test for the purpose of determining the qualification of new voters specified that the tests of reading and writing 'should be standardized on the basis of the median achievement of children at the end of the fourth grade in city schools'.[6] This is probably the origin of the general tendency at present in the United States of America to consider the completion of four years of primary schooling as a criterion of functional literacy.

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[1] Japan, Literacy Investigation Committee, *Nihonjon no Yomikaki Noryoku* (The reading and writing abilities of the Japanese), Tokyo, Tokyo University Press, 1951.

[2] Philippines, Congress Joint Committee on Education, *Improving the Philippines Educational System*. A report submitted to the Joint Congressional Committee on Education by its Board of Consultants and Technical Staff, Manila, Bureau of Printing, 1951.

[3] United Kingdom, Ministry of Education, *Reading Ability: Some Suggestions for Helping the Backward*, London, HMSO, 1950.

[4] S. S. Zarcovic and V. Balaban, *Ispitivanje Pimenosti/An Enquiry into Literacy*, Belgrade, Savezni Zavod za Statistiku, 1955.

[5] William S. Gray, *The Teaching of Reading and Writing*, Paris, Unesco, 1956, p. 24.

[6] John Cayce Morrison, 'New York State Regents Literacy Test', *Journal of Educational Research*, Vol. 12, September 1925, pp. 145-55.

Methods of measurement

COMPLETE CENSUS OF POPULATION

Once a criterion of literacy is established, based on the definitions recommended by Unesco, or suitably modified in the light of national requirements, the next question is how to measure the extent of illiteracy in the population—in other words, how to establish national statistics of illiteracy. As indicated above, the most common method in use is by means of a complete national census. During the period 1945-54, about seventy countries have taken national censuses of population covering the question of illiteracy. Most of these countries will be taking another census of population around 1960, including one or more questions on literacy and illiteracy. In addition, many of the countries which did not take a population census during the 1945-54 period have done so or are planning to do so during the next decennial period. For example, the Union of Soviet Socialist Republics carried out a population census in January 1959, in which questions on literacy and illiteracy were put to the population for the first time since 1939. The first national census of Iran, taken in November 1956, also included the question of literacy. Other countries planning to take population censuses in 1960 or 1961 include: Ethiopia and Eritrea (for the first time), Cambodia, Laos and Viet-Nam (for the first time in each country), and Indonesia (for the first time since 1930). It is expected that the literacy question will be covered in most or all of these censuses.

The form of the question or questions on literacy to be included in the census schedule will depend on national needs and practices, taking into consideration international recommendations on these matters.[1] In general, it may take the form of one question: 'Can you read and write?' or two separate questions: 'Can you read?' and 'Can you write?' It is recommended by the United Nations Population Commission that if should be sufficient to ask only one question, since literacy is defined as the ability both to read and to write. It would also simplify the work of tabulation, for it would make unnecessary the separate tabulation of those who: (a) can both read and write; (b) can read but not write; (c) can write but not read; (d) can neither read nor write. As stated above, if it is important to specify the language in which the person is literate, then the question could be modified, as for example, 'Can you read and write in English? In French? In any other language?'

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[1] International recommendations on census questions concerning various topics, including education, may be found in: United Nations, *Handbook of Population Census Methods*, Vol. I, *General Aspects of a Population Census;* Vol. II, *Economic Characteristics of the Population;* Vol. III, *Demographic and Social Characteristics of the Population* (*Studies in Methods*, Series F, No. 5, Rev. 1). New York, United Nations, 1958, 1959.

Since the question of literacy is applicable only to the population above a certain minimum age level (say 10 or 15 years), it can be omitted with respect to children below that age level. However, it should not be omitted for any part of the population above the minimum age level, such as, for example, old people who may not have had any school education, or blind persons who may or may not have learned to read and write, perhaps in Braille. In the case of blind persons, the Census of Canada, 1931, regarded a blind person as literate 'if he could read and write in any language before becoming blind or if, being born blind, he or she has been taught to read and write'.

SAMPLE SURVEY OF POPULATION

Where the question of literacy is not included in a national population census, or if a national census is for some reason not feasible, then a sample survey may be carried out on this subject.[1] In the United States of America, such sample surveys were carried out in 1947 and 1952, covering the 'civilian non-institutional population 14 years old and over'.[2] In Madagascar, a sample survey on illiteracy was conducted in 1953 among the adult native population (14 years old and over).[3] In Burma, illiteracy was one of the questions investigated in a multi-stage sample census, carried out in 1953 and 1954, covering sub-samples of the population in 252 towns and 3,159 village areas. In Jamaica, a sample survey of population was conducted in 1953, which included, among others, a question on literacy. An interesting feature of this Jamaican sample survey, as concerning literacy, was the use of a set of cards each containing a short printed paragraph, followed by a few isolated letters of the alphabet. After the enumerator had recorded the respondent's answers to the questions: 'Does this person read? Does this person read and write?' he was to give the person a reading test by showing him one of the cards. The result of the test was to be noted as: (a) reads

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1. For a general discussion of the use of a sample survey when a census is not feasible, see: United Nations, *Handbook of Population Census Methods*, Vol. I, chapter VIII.
2. United States Bureau of the Census, *Illiteracy in the United States: October 1947* (*Current Population Reports*, Series P-20, No. 20); *School Enrolment, Educational Attainment, and Illiteracy: October 1952* (*Current Population Reports*, Series P-20, No. 45), Washington, D.C., Government Printing Office, 1948, 1953.
3. 'Note sur l'Analphabétisme à Madagascar', *Bulletin de Statistique Générale de Madagascar et Dépendances*, 5ème année, No. 17, pp. 61-3.

easily; (b) reads with difficulty; (c) reads very little except letters; (d) unable to read, etc.

Recently the United Nations Committee on Information from Non-Self-Governing Territories recommended that sample surveys of illiteracy be organized by the governments of the territories, if necessary with the assistance of Unesco.[1] Such sample surveys could be made at a moderate cost by means of modern scientific sampling methods. It would be possible to put a simple question or questions on literacy, as in a complete census, but only to the much smaller number of persons who would be included in the sample. However, since the sample would be rather small, it may be preferable to use a standardized test of reading and writing which could be developed by each country for this purpose. The nature and use of standardized literacy tests will be discussed in the following paragraphs.

STANDARDIZED TEST OF LITERACY

The example given above of a reading test used in Jamaica in connexion with the 1953 sample survey of population is not that of a standardized test. A 'standardized test' has been defined as 'a test for which content has been selected and checked empirically, for which norms have been established, for which uniform methods of administering and scoring have been developed, and which may be scored with a relatively high degree of objectivity'.[2] Standardized tests of school achievement, including reading, writing, arithmetic and other subjects, have been developed and used in many countries. For the specific purpose of testing the reading and writing ability of the adult population, the examples mentioned earlier from Japan, Philippines, United Kingdom and Yugoslavia may be considered as using standardized tests of literacy. Obviously they cannot be used for literacy testing in any other country without considerable modification and restandardization. They must be valid for testing the various abilities of reading and writing in the particular culture and language of the country, and national norms must be established for the interpretation of the test scores. In fact, it would be much simpler and more satisfactory for each country to make its own test or tests, using the techniques of test construction and standardization already well developed.

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[1] United Nations, Committee on Information from Non-Self-Governing Territories, *Report on Educational Conditions in Non-self-governing Territories* (Document A/AC.35/L.307, 11 May 1959), para. 43.

[2] Carter V. Good, ed., *Dictionary of Education*, 2nd edition, New York, Toronto and London, McGraw-Hill, 1959.

One example of the use of literacy tests to verify the results of a census enumeration is found in the case of Yugoslavia mentioned above. After the population census of 1953, a post-enumeration sample survey was conducted in order to test the accuracy and value of the census results. The part of the survey dealing with the literacy question consisted of: (a) drawing a sample of individuals who were asked by a specially trained investigator to answer again the census question concerning ability to read and write; and (b) drawing another sample among those who had declared themselves 'literate' and those who had been recorded as 'illiterate' in the census enumeration, who were given tests of reading and writing specially prepared for the purpose. On the basis of this experience, the conclusion was stated that the sampling control of literacy data does not raise serious difficulties.[1]

OTHER METHODS OF MEASUREMENT

Various other methods have been used in different countries to measure the extent of illiteracy. Some countries have, in the past, compiled statistics on illiteracy based on the number and proportion of persons signing the marriage register by mark, because presumably they were not able to write their own names. This method is clearly not adequate for measuring the extent of illiteracy in an entire country, since the persons covered by these records would be a very small and non-representative part of the whole population. Another method used in some countries is to discover the proportion of men called up for military service who cannot read and write. This certainly produces biased data, because of the sex and age limitations of the persons concerned.[2]

Where reliable statistics of illiteracy are not available from population censuses or sample surveys, it may be necessary sometimes to make rough estimates of illiteracy rates based on other types of educational statistics.

For example in Argentina, census statistics on illiteracy were not available between 1914 and 1947. However, the question of illiteracy was investigated in connexion with the Fourth National School Census of 1943. This census covered all persons under 22 years of age, and all parents of children under 22 years of age. The total number and proportion of illiterates in the population 14 years old and over were estimated from the results of the school census, with the help of other demographic and educational data.[1]

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[1] S. S. Zarkovic, 'Sampling Control of Literacy Data', *Journal of the American Statistical Association*, Vol. 49, No. 267, September 1954, pp. 510-19.

[2] For an instructive example of the discrepancies in illiteracy data derived from marriage registers, military records and population censuses of the same country, see: Unesco, *World Illiteracy at Mid-century*, Paris, 1957, p. 22.

Even without a special school census, the regular school statistics of a country, compiled over a long period of time, can furnish a useful basis for estimating the rate of illiteracy. When these figures are combined with demographic data on the increase of population, changes in its age structure, etc., it is possible, within certain limits, to arrive at some estimates concerning the literacy rates of the population in given age groups, or of the entire adult population.[2]

Finally, the question of illiteracy may be regarded as a special case of the census investigations concerning level of educational attainment of the population. In fact, the census questions on level of educational attainment may specify mere ability to read and write (or ability to read only) as the lowest level of positive educational attainment. For example, in the censuses of Hungary, the question on literacy is usually combined with the general one on level of educational attainment, so that the returns show: (a) those who have completed university or higher education; (b) those who have completed the eighth, seventh, sixth, . . . first year of secondary or vocational school; (c) those who have completed the eighth, seventh, sixth, . . . first year of primary school; (d) those who can read and write; (e) those who can only read; (f) those who can neither read nor write. In the 1959 Census of the USSR, the questions on education asked whether the person had: completed higher education; not completed higher education; completed a vocational school for technicians, secondary school, seven-year school, or primary school. Persons 9 years old and over who had not completed primary education were asked if they could read and write, read only, or could neither read nor write.

Even where no separate question is asked about literacy or illiteracy, some estimates can be derived from the census data on educational attainment, if the latter are in sufficiently detailed categories. For example, since 1931 the question on literacy has not been included in the population censuses of Canada, but detailed data are available on the number of years of schooling received by persons 5 years old and over. From these data may be derived some estimates concerning the extent of illiteracy among the urban and rural populations, male and female, in given age groups by assuming a certain relationship between illiteracy and the number of years of schooling received.

[1] Argentina, IV *Censo Escolar de la Nación*, Tomo I, *Resumen General de toda la Republica . . .*, Buenos Aires, Consejo Nacional de Educación, 1948, pp. 144-54.

[2] For a discussion of the relationship between school enrolment and reduction of illiteracy, see: Unesco, *World Illiteracy at Mid-century*, chapter VIII.

Classification and tabulation

Based on the concepts, definitions and methods of measurement discussed above, statistics of illiteracy may be presented in different ways, depending on the requirements of each country. The following are some of the principal ways of classifying and tabulating data on literacy and illiteracy.

CLASSIFICATION BY LITERATES AND ILLITERATES

The first criterion of classification is by literacy, the characteristic which is investigated. As shown by the above discussion, only two categories are essential, namely 'literates' and 'illiterates'. However, as usually happens in census work, there may be a third category, that is, for persons whose literacy status is unknown or unspecified. This may result from omission on the part of enumerators, or more probably from the fact that certain persons were not at home when the enumerators called. Tables on literacy and illiteracy may be prepared in different ways, showing, for example: (a) the number and proportion of (i) literates, (ii) illiterates, and (iii) persons whose literacy status is unspecified; (b) the number and proportion of literates and of illiterates, without the category of literacy status unspecified; (c) the number and proportion of literates only, or of illiterates only; (d) only the proportion of literates or of illiterates.

The first method of presentation is the fullest and most satisfactory way of summarizing such data for a whole country or for large sections of the population—for example by provinces or by urban and rural areas. If desired, this presentation may be used even for the smallest area or the smallest section of population. However, it would then entail a large amount of tabular space, sometimes with a large number of cells left blank or filled with very small numbers. The requirements of space are not excessive if the summary is for the whole country or for its major political divisions. The tables could be reduced in size if the number and proportion of the unspecified category are so small that they may be conveniently omitted, thus conforming to the second method listed above.

Here the problem arises as to what to do with the cases of unspecified literacy status. One solution is to combine such cases with either the literate or the illiterate category, which would have the effect of increasing one category and decreasing the other at the same time. Another solution is to distribute the unspecified cases between the two separate categories in the same ratio as those two categories stand to each other. For example, if 66 per cent of the population are found in the 'literate' category, 33 per cent in the 'illiterate' category, and 1 per cent in the 'unspecified' category, the individuals in the last-named category could be distributed by assigning two-thirds to the first, and one-third to the second category. Still another solution is to exclude from the table all unspecified cases, thus, in the hypothetical example, accounting for only the 99 per cent rather than 100 per cent of the total population.

We shall illustrate these different methods by two actual examples based on national census data.

EXAMPLE 1. *France (census of 1946)*

	Number	Per cent
Total population, 10 years old and over	34 237 824	100.0
Can read and write	31 743 158	92.7
Cannot read and write	1 115 333	3.3
Not declared	1 379 333	4.0

(a) Assuming that all those who did not declare themselves on this question were in fact able to read and write, we have:

Total population	34 237 824	100.0
Literate	33 122 491	96.7
Illiterate	1 115 333	3.3

(b) Assuming that all such undeclared persons were in fact illiterate, we have:

Total population	34 237 824	100.0
Literate	31 743 158	92.7
Illiterate	2 494 666	7.3

(c) Distributing the undeclared cases proportionally between the literates and illiterates, we have:

Total population	34 237 824	100.0
Literate	33 075 672	96.6
Illiterate	1 162 152	3.4

(d) Omitting the undeclared cases from the tabulation, we have:

Total population (excluding persons unspecified for literacy)	32 858 491	100.0
Literate	31 743 158	96.6
Illiterate	1 115 333	3.4

EXAMPLE 2. *Brazil (census of 1950)*

	Number	Per cent
Total population 15 years old and over	30 249 423	100.0
Can read and write	14 916 779	49.3
Cannot read and write	15 272 632	50.5
Literacy unspecified	60 012	0.2
(a) Assuming that all those unspecified for literacy were able to read and write, we have:		
Total population	30 249 423	100.0
Literate	14 976 791	49.5
Illiterate	15 272 632	50.5
(b) Assuming that all those unspecified for literacy were unable to read and write, we have:		
Total population	30 249 423	100.0
Literate	14 916 779	49.3
Illiterate	15 332 644	50.7
(c) Distributing the unspecified cases proportionately between the literates and illiterates, we have:		
Total population	30 249 423	100.0
Literate	14 946 431	49.4
Illiterate	15 302 992	50.6
(d) Omitting the unspecified cases, we have:		
Total population (excluding persons unspecified for literacy)	30 189 411	100.0
Literate	14 916 779	49.4
Illiterate	15 272 632	50.6

It may be seen from these two examples that where the number of unspecified cases is relatively large, as in the case of France, the different methods of treating them could give widely different results. Where the number of unspecified cases is relatively small, as in Brazil, the differences become rather unimportant. It should be noted that the last two methods of treatment give identical results in percentages, but different results in absolute numbers. Therefore, if the percentage of illiteracy is immediately needed, rather than the actual or possible number of illiterates, the last method is to be recommended, since it involves less work in computation.

CLASSIFICATION BY SEX AND AGE

The next question to be examined is that of classification by sex and by age. It is obvious that where there are real differences between the sexes in regard to literacy and illiteracy, all such data should be shown separately for each sex. As far as age classification is concerned, it is generally agreed that a minimum age limit of 10 or 15 years is useful for the tabulation of illiteracy statistics, so as to leave out the factor of young children not old enough to become literate through the usual processes of school education. While for certain educational purposes it would be advisable to begin the tabulation of illiteracy statistics from the age of 10 years, there are other reasons (for example, demographic analyses relating to the economically active population) in favour of a minimum age limit of 15 years. However, in order to enable the most use to be made of illiteracy data—particularly in countries where illiteracy rates are still high—the lower age limit of 10 years would seem to be preferable. On the other hand, for purposes of international comparison, illiteracy data relating to the population 15 years old and over would be more useful, since a larger number of countries can thus be brought into comparison.

Once the minimum age level for tabulation is determined, a certain number of age groups must be selected for detailed presentation. Here considerations of economy of labour and of space require the adoption of a reasonable number of separate age groups to be shown. This number may vary according to the circumstances and requirements of different countries, but should probably not exceed 10 age groups altogether. In order to overcome the error in age reporting, commonly found in census returns, of an undue concentration in ages ending in zero—20, 30, 40, etc.—it is advisable to adopt age groups such as 15-24, 25-34, 35-44, etc., instead of 10-19, 20-29, 30-39, etc. Finally, the first two or three age groups need to be more detailed because the changes in regard to illiteracy rates at these age levels may be more significant. Thus, the age groups recommended for international reporting of illiteracy data are: 10-14, 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, 65 years and over.

It may often be necessary to add another group for persons whose age is unknown (or unreported). Where this group is of considerable size, the computation of illiteracy rates may be different according to whether the unknown age group is included in, or excluded from the total population above a specified age. For example, the census of Argentina, 1947, gave the numbers of illiterates by age groups shown in Table 1.

TABLE 1

Age group	Number of persons	Number of illiterates
14-29	4 655 440	386 731
30-49	4 283 350	531 172
50 and over	2 315 160	581 731
Age unknown	64 946	42 044
TOTAL	11 318 896	1 541 678

If the rate of illiteracy for the total population 14 years old and over is calculated including the unknown age group, the result is 13.6 per cent; but if that large group were excluded, the result would be 13.3 per cent. We believe that the unknown age group should be included, since it may be assumed that most of the unknowns were in the higher age groups—at least above the minimum age of 14 years.

CLASSIFICATION BY URBAN AND RURAL POPULATIONS

Besides the classification of literates and illiterates by sex and by age, it may often be found useful to tabulate the data separately for the urban and rural populations. Here we encounter the problem of the definition of 'urban' and 'rural' for purposes of international comparison. While a number of countries have compiled and published census data on illiteracy separately for urban and rural areas, there is no uniformity in the definitions used by these or other countries. For example, Argentina (census of 1947) published statistics on illiteracy separately for urban and rural areas, 'urban' areas being defined as cities and other populated centres of 2,000 or more inhabitants. Ceylon (census of 1946) tabulated illiteracy data separately for the 'municipal and urban council areas' which were identified by name. Greece (census of 1951) classified its literacy data by 'urban', 'semi-urban' and 'rural' districts, according to whether the most heavily populated place in the district had 10,000 or more, 2,000 to 9,999, or less than 2,000 inhabitants. Panama, in the census of 1950, considered as 'urban' those places with 1,500 or more inhabitants, having urban characteristics such as electricity, water and sewage systems, paved streets, commercial establishments, communication facilities, secondary schools, etc. The United States of America, in its census of 1950, adopted a new definition of urban areas as being: (a) places of 2,500 inhabitants or more incorporated as cities, boroughs and villages; (b) incorporated towns of 2,500 inhabitants or more (except in those States where 'towns' are simply minor civil divisions of counties); (c) the densely settled urban fringe, including both incorporated and unincorporated areas, around cities of 50,000 or more; and (d) unincorporated places of 2,500 inhabitants or more outside any urban fringe. The population not living in these areas is classified as rural. In the tabulation of illiteracy statistics from the sample survey of 1952, the rural population was further classified into rural farm and rural non-farm population.

On the problem of urban-rural classification in general, the United Nations recommendation is as follows: 'Because of the diversity of concepts used in the classification of areas as urban and rural in various countries, it is not practicable to establish uniform definitions of urban and rural population for international use. It is believed that for purposes of international comparison the classification by size of locality . . . is, at the present time, most nearly adequate and should be used in addition to the urban-rural classification which countries may continue to use for national purposes. The interpretation of any urban-rural tabulations employed will be facilitated if countries give the definitions of urban and of rural areas of populations used for census purposes.'[1]

CLASSIFICATION BY ETHNIC GROUPS

Classification of literates and illiterates by ethnic groups is chiefly of national interest, since there is obviously no basis for international comparison. Such classifications have been used, for example, in the tabulation of illiteracy data in Ceylon (for Sinhalese, Tamil, Moorish, Malay, Burgher, Eurasians, English, other Europeans, etc.), in Malaya (for Malays, other Malaysians, Chinese, Indians, Europeans, Eurasians, etc.), in the Union of South Africa (for White, Native, Asiatic and Coloured), and in the United States of America (White and Non-White). Other forms of ethnic classification are used in Yugoslavia, where data on illiteracy are tabulated separately for 18 'nationality groups' (Serbs, Croats, Slovenes, etc.), in Egypt according to religious groups (Muslim, Christian, Jews, Other), and in Mozambique according to degree of cultural assimilation ('Civilized' and 'Non-civilized').

CLASSIFICATION BY SOCIAL GROUPS

Still another method of classification of illiteracy statistics which may be of national interest is by social groups which are meaningful in a given country. For example, in the 1951 Census of India, figures on illiteracy were shown for the following 'livelihood classes':

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[1] United Nations, *Principles and Recommendations for National Population Censuses*, New York, 1958, p. 11 (*Statistical Papers*, Series M, No. 27).

All agricultural classes:

1. Cultivators of land wholly or mainly owned, and their dependants.
2. Cultivators of land wholly or mainly unowned, and their dependants.
3. Cultivating labourers and their dependants.
4. Non-cultivating owners of land, agricultural rent receivers, and their dependants.

All non-agricultural classes: Persons (including dependants) who derive their principal means of livelihood from:

5. Production other than cultivation.
6. Commerce.
7. Transport.
8. Other services and miscellaneous sources.

Where census data are classified by occupation and by status (as employer, employee, etc.),[1] it would not be difficult to arrange for the tabulation of illiteracy figures by meaningful occupational groups.

OTHER TYPES OF CLASSIFICATION

It may also be useful in census work, and quite feasible in sample surveys, to cross-classify literates and illiterates by years of school completed, or by age at which the person ended his formal schooling. Thus it would be possible to show the relationship between literacy and years of schooling, and to distinguish between 'original' illiterates—those who never learned to read and write in school—and 'relapsed' illiterates—those who left school at an early age and have lost their reading and writing abilities through disuse. In a sample survey using standardized tests of reading and writing, the results could of course be tabulated in the form of frequency distributions according to reading score and according to writing score, and in two-way tables showing at the same time the distributions of reading and writing scores.

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[1] See: International Labour Office, *International Standard Classification of Occupations* (Report II); *International Classification according to Status* (Report III): reports prepared for the Ninth International Conference of Labour Statisticians, Geneva, 1957.

IV. *Statistics on the educational attainment of the population*

Definition of 'educational attainment'

As mentioned in the previous chapter, the ability to read and write may be considered as the minimum level of educational attainment of an individual. With the development of education in all countries and its extension to an ever-increasing segment of the population, it becomes important to measure the highest level of education attained by each person, and the average level of education attained by the total population of a given country or by a given population group. For this purpose the measurement of literacy and illiteracy, as discussed in the previous chapter, is not enough. In this context, the following definition is recommended:

> *'The educational attainment of a person is the highest grade or level of education completed by the person in the educational system of his own or some other State.'*

The terms 'grade' and 'level' will be discussed later in the following chapter, in connexion with statistics of educational institutions. The emphasis in the present definition is on the words 'highest' and 'completed'. Suppose a person ended his formal schooling at the age of 10 years, having completed three grades of primary school but not the fourth. The highest grade completed is therefore the third grade or third year of schooling. Another person, having completed primary education, say of six years' duration, but no more, is said to have completed the sixth grade or sixth year of schooling. If he had, in addition, completed three years of secondary school, then his educational attainment is given as the ninth grade or ninth year of schooling. However, if a person had spent nine years altogether going to school, but for various reasons had not completed more than the sixth grade, his educational attainment is only the sixth grade, not the ninth. Thus, for those persons whose passage through schools was retarded, the number of grades completed would be less than the number of years spent in school; whereas if a person's schooling was accelerated, the number of grades completed would be more than the number of years spent in school. In other words, it is not the number of years spent in school which is counted for the person, but (we repeat) the highest grade which he was able to *complete* in the regular system of schools where he received his education. The person may have received his education in more than one country, under more than one system of education. In such cases, the highest grade completed should be determined on the basis of the most advanced stage reached in any of the different systems.

Some countries may prefer to record a person's educational attainment not by the highest grade of schooling completed, but by the highest level of education completed. In that case the measurement will be in terms of primary education completed, secondary education completed, etc. Note that a person having completed one level, but not the next higher level, should be recorded as having completed only the lower of these levels. Thus if a person had completed secondary education and received a certain amount of higher education (without completing any part of it recognized as a separate level), he should be counted as having completed secondary education, and no more. We need to define further the concept of 'completion'. Here the criterion should be the successful completion of a given grade or level, and not merely the fulfilment of minimum requirements for enrolment and attendance. This should be based on objective evidence, such as promotion, examination, the possession of a certificate, diploma or degree.

Now the question may be raised, whether the completion of a particular level of education has any meaning for international comparisons. Without entering into discussions concerning qualitative differences in the various school systems (which would lead us beyond the scope of this manual), we must still consider whether it is valid to compare the proportion of the population having completed, say, primary education in different countries, where the duration of primary education may be 4, 5, 6, 7 or 8 years. Similarly, completion of secondary education may come, in different countries and under different systems, after 9, 10, 11, 12 or 13 years of schooling. Here we must emphasize that in all statistical compilations on education which are intended for international use it is essential to give, by means of diagrams and descriptions, the elements of the school system or systems to which the statistics apply. Only then can the reader be informed of the meaning behind the figures and be forewarned against making inappropriate comparisons.

It may be seen from the above discussion that the presentation of statistics on the educational attainment of the population can be more useful, and the figures more comparable, if they are based on the highest grade completed rather than the highest level of education. Particularly in those countries where the educational system provides a continuous 'ladder', of which each rung may be represented by a year's schooling, the statistics of educational attainment measured by the highest grade completed are more meaningful than those measured by the highest level of education completed. Furthermore, the usefulness of these statistics is increased by the possibility of deriving from them average measures for a given population, such as the median grade or year of schooling completed. It is not possible to compute the median grade or year completed if the population is classified only by level of education completed and not by the highest grade completed.

Methods of measurement

In general, the methods of measuring the educational attainment of the population are similar to those discussed in the previous chapter. The most common is by means of a population census or sample survey. Otherwise, estimates may be prepared on the basis of previous censuses or surveys, and on records over a number of years of school enrolment, of examinations, of school-leaving certificates, and of degrees or diplomas granted.

CENSUS OR SURVEY DATA ON EDUCATIONAL ATTAINMENT

At least 70 countries have investigated the question of the educational attainment of their populations in a census or sample survey since 1945. The majority of these countries also investigated the question of illiteracy at the same time. On the other hand, in their more recent censuses, a number of countries, mostly in Europe and North America, have concentrated on the measurement of level of educational attainment, leaving out the particular question of literacy and illiteracy, which has become of little or no interest to them.

The countries which have investigated the level of educational attainment in their recent population censuses fall into two roughly equal groups. Practically all the countries in the Western Hemisphere and some in Asia, following the recommendations of the United Nations and of the Inter-American Statistical Institute, have compiled their statistics on educational attainment by the highest grade or year completed.

On the other hand, the majority of countries in Europe, and some of the Asian and African countries, have adopted various methods, mainly based on the highest level of education completed.[1]

The United States of America, in the Census of 1940, had asked a single question on the highest grade of school completed. However, it was found that respondents frequently reported the year or grade in which they were enrolled, or had last been enrolled, instead of the one completed. Hence in the 1950 census, two questions were put: (a) 'What is the highest grade of school that he has attended?' and (b) 'Did he finish this grade?' The tabulations were then based on combination of (a) persons who had been enrolled in, and had finished, the indicated grade, and (b) persons who had been enrolled in, but had not finished, the next higher grade.[2]

The Philippines, in the 1956 sample survey of households, asked a question on the highest grade or year completed in the regular system of education on the elementary, high school or collegiate level. In addition to statistics for the highest grade completed, information on vocational training was also gathered for all persons 10 years old and over.[3]

Portugal (Census of 1950) asked the following two questions: (a) level of education possessed—primary, secondary, higher education; (b) level of the educational institutions attended (same three categories as above).

Spain (Census of 1950) also asked two questions: (a) education in progress; and (b) education completed. The answer to each question was coded as follows: O = none; E = primary school; P = vocational school; M = intermediate school; S = higher education.

Finland, in the Census of 1950, asked the following questions: '(1) Have you passed: (a) a primary school, (b) a middle school, (c) a matriculation examination?' '(2) Have you completed or passed: (a) a vocational course, (b) a vocational school or institute, (c) final examination at a higher institution?'

Hungary, in the Census of 1949, asked for the following information,

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1. For a methodological discussion concerning census data on educational attainment in 23 European countries and the United States of America, see: Unesco, *Census Data on Level of Education* (doc. ST/R/19), Paris, 1958.
2. United States Bureau of the Census, *Census of Population 1950: Education*, Washington, D.C., Government Printing Office, 1953 (*Special Report* P-E, No. 5B).
3. Philippines, Bureau of the Census and Statistics, 'The Philippine Statistical Survey of Households, May 1956', *Bulletin*, Series No. 2, Vol. I, *Demographic and Socio-economic Data*, Manila, 1957.

in addition to information on ability to read and write: (a) university or academy completed; name of university or academy, name of the faculty, name and date of the university or academic diploma; (b) eighth, seventh, sixth, fifth, fourth, third, second or first class completed, of the middle school or of the vocational middle school; name of the school and its branch; name and date of the certificate of final examination at middle (vocational) school; (c) eighth, seventh, sixth, fifth, fourth, third, second or first class completed, of a primary or people's school; (d) workers' school (adult education) completed; name and degree; (e) other vocational schools or courses completed; name and duration of courses; (f) professional examination passed.

In the 1945 Census of Sweden, the following questions were asked:

A. School education (primary, higher primary, adult continuation, lower secondary, municipal middle school, practical middle school, higher girls' school, higher secondary school, etc., i.e. general education up to higher certificate level): (a) education in progress; state grade and type of school; (b) completed education; state examination, or final grade, and type of school.

B. Vocational education (all education of a type other than above, such as at apprenticeship and trade schools, workshop schools, domestic science schools, farm schools, commercial schools, commercial higher secondary schools, technical secondary schools, universities and colleges, etc.): (1) Education at a university or college; (2) Education at some other institution for vocational education in the form of whole day instruction for at least five consecutive months: (a) education in progress; state educational institution, and specialization; (b) completed education; state examination passed or studies completed at school (course), and specialization.

C. Other education (such as short courses, vocational education at correspondence schools, etc.): (a) education in progress; state educational institution and specialization; (b) completed education; state educational institutions and specialization.

Some of the countries adopted concepts somewhat different from these two principal types. For example, Canada (Census of 1951) asked for the total number of years of schooling rather than the highest grade completed. The United Kingdom (Census of 1951) asked for the 'age at which full-time education ceased'. France (Census of 1954) also included a question, 'Up to what age did you attend school regularly?' Other examples of variations and additional aspects of the census question on educational attainment include: (a) the kind of examination passed (Finland, 1950; German Federal Republic, 1946; Iceland, 1950; Norway, 1950; Sweden, 1945); (b) certificates or diplomas obtained (Belgium, 1947; France, 1954; Greece, 1951; Hungary, 1949; Italy, 1951; Netherlands, 1947); (c) number of years the person attended school (German Democratic Republic, 1950; Greece, 1951); (d) knowledge of foreign languages (Albania, 1955); (e) name of institution granting the certificate or diploma (Belgium, 1947; Netherlands, 1947).

The question on school attendance is often asked at a population census, either separately, or combined with the question on educational attainment. For example, Albania (Census of 1955) asked the following questions on education: (a) What school has he completed or is he attending? (b) How many classes has he completed? (c) Where? (d) Which courses has he completed? (e) What was the duration of the courses? (f) Which foreign languages does he know? Ability to write them? Ability to speak them?

Austria (Census of 1951) asked a question on school attendance for persons under 14 years of age; and for persons 14 years old and over, on school education completed before the date of the census. France (Census of 1954) asked an additional question as follows: 'If you are still attending school or if you are continuing your studies, what type of educational institution do you attend? State, for example: primary school, complementary course, *collège moderne*, apprenticeship centre, National Agricultural School, faculty of medicine, etc.' Portugal, Spain and Sweden, as shown above, asked separate questions concerning education in progress and education completed. The United Kingdom (Census of 1951) asked for 'full-time' or 'part-time' attendance at a school, university or other educational establishment. The United States of America (Census of 1950 and current population surveys) asks for attendance at or enrolment in any regular school or college, including night schools, extension schools, or vocational schools, if part of the regular school system.

Census or sample survey statistics on number of persons attending school, by sex and age, and by level and type of school attended, can be very useful information to supplement data on level of educational attainment and on current school enrolment. However, the principal source of statistics on current school enrolment is usually found in the regular reports of the educational institutions, as discussed in the following chapter of this manual.

REGULAR REPORTS OF EDUCATIONAL INSTITUTIONS

Where data on educational attainment of the population are not available from population censuses or sample surveys, some estimates may be prepared on the basis of regular school statistics compiled over a number of years, covering enrolment or attendance, examinations, certificates and diplomas, etc. Some difficulties may arise from the incompleteness of current school statistics, particularly as regards private schools. Where reasonably complete data are available for a sufficient period of time, estimates may be prepared on: (a) the number and proportion of the population in a given age group (for example, 5-14 or 5-19 years old) receiving school education of a certain level (say primary education, or primary and secondary education); (b) the number and proportion of persons in this age group completing a given level of education (primary, secondary, etc.); (c) the number and proportion of such persons having survived to a certain age; and thus (d) the number and proportion of persons in the present population of a certain age who may be assumed to have attained a given level of education.

For example, the number of new graduates from all universities and colleges in Japan is given for the period 1912-25, and for each academic year from 1926 to 1954, distributed by field of study.[1] These figures could be added up, and reduced by appropriate factors to allow for mortality. The results could represent the estimated numbers of university and college graduates in each field of study, among the population of Japan in 1955. The total number of such graduates could be roughly compared with the number of persons reported at the 1950 census as having completed two, three or more years of higher education. Similar computations could be made for other countries and other levels of education, provided that reasonably complete statistics are available over a long period of time.

Classification and tabulation

The statistics on the educational attainment of the population, obtained by a population census or survey, need to be classified by level of education, by sex and age, and by other categories as may be appropriate for each country. The problem of comparability is more serious with these figures than with the statistics of illiteracy, since the levels of education have widely different meanings in various countries. Here again it should be emphasized that descriptions of educational systems are an essential accompaniment of statistics of this kind, if they are to be useful for international purposes.

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[1] See: Japan Ministry of Education, *Demand and Supply for University Graduates*, Tokyo, 1958.

CLASSIFICATION BY LEVEL OF EDUCATION

The concept of levels of education, and their definitions, will be discussed in the next chapter. Suffice it here to say that the minimum requirement for international comparisons would be a classification by three levels: primary, secondary and higher education. Further subdivisions, as for example, by general and vocational education (especially at the second level), and by lower and upper stages (of the first and second levels) should be used whenever possible. A minimum or near minimum classification by level would be as follows: (a) persons having no formal education (including illiterates); (b) other persons having completed less than primary education; (c) persons having completed primary, but not secondary education; (d) persons having completed secondary, but not higher education; (e) persons having completed higher education; (f) persons whose educational attainment is unspecified.

The first category may not be necessary for those countries where practically the entire population has received a certain amount of formal education. But even in those countries, the second category would be needed, where there are substantial numbers of persons (mostly of the older generations) who have not *completed* their formal education at the first, or primary level. The category (c) may be subdivided into two groups, if appropriate, namely: (c.1) persons having completed four years or more (but not the full course) of primary education; and (c.2) persons having completed the full course of primary education (for example, 6 or 8 years).

Similarly, category (d) may be subdivided into: persons having completed (d.1) the lower stage of secondary education; and (d.2) the higher stage of secondary education. Or else, distinction may be shown between: persons having completed (d.1) a general secondary education; and (d.2) a vocational type of secondary education. If these two sub-classifications are used at the same time, they may be combined for example as follows: persons having completed: (d.1) general secondary education, lower stage; (d.2) general secondary education, higher stage; (d.3) vocational secondary education, lower stage; (d.4) vocational secondary education, higher stage. If, in addition, it is desired to show separately those who have completed a teacher training course, whether at the secondary level or higher, suitable modifications may be introduced in a similar manner.

A word of caution may perhaps be useful here regarding the possible error of double-counting. For example, where a person has completed both a general and a vocational or teacher training course, and one of these is at a higher level than the other, the problem does not arise, since the compilation is based on the 'highest' level of education completed. But suppose that the general and vocational (or teacher training) courses are at the same level, the person should obviously not be counted more than once. It would be difficult to lay down a hard and fast rule concerning such cases, but a reasonable rule to apply may be to classify the person according to the latest of the courses which he had completed. Thus, a person having completed his general secondary education and, later, a vocational or teacher training course at the same level, would be classified under the category for secondary vocational education or teacher training. On the other hand, if he had completed his vocational or teacher-training course before his general secondary education, he would be classified under the latter category.

Category (e) above, for higher education, may also be subdivided, for example, into: (e.1) junior college and (e.2) senior college; or (e.1) non-university level, and (e.2) university level. Or else it may be desired to distinguish between: (e.1) completion of undergraduate level, and (e.2) completion of a post-graduate level. In fact, for certain purposes, it may be useful to classify university graduates by special fields of study. This question will be further discussed in the next chapter.

Category (f), educational attainment unspecified, may present a difficulty in tabulation, if the numbers involved are more than a few. Obviously it would be incorrect to combine these cases with any of the other categories, although in a given situation, the local enumerator or supervisor may have a very good idea where most of the unspecified cases should be classified. There seem to remain only two reasonable alternatives: either to distribute the unspecified cases proportionately among the other categories (which may involve a lot of extra work), or simply to tabulate them in a separate category, but subtracting them from the total population when computing percentages for each of the specified categories. The methods, and the reasoning, are the same here as in the case of persons unspecified for literacy, discussed in the previous chapter.

Finally, we repeat what was said earlier concerning the advantages of presenting statistics on educational attainment by the highest grade or year completed, rather than by the highest level completed. This may be done in one of two ways. If an educational 'ladder' exists in the school system, so that each rung represents a year's progress, it may be feasible to give a numerical value to each grade of schooling at every level. Thus the completion of primary education, say at the end of six years, would be represented as grade 6; completion of junior secondary school three years later would be represented as grade 9, etc. However, most of the school systems in the world today are not organized in this fashion. It may therefore be necessary to specify the number of grades or years completed at each level and for each type of education. For example, fourth year primary, first year secondary, third year commercial, second year teacher training, etc. With the help of a detailed description, and a diagram of the school system, these categories could still be translated into numerical values representing the highest level of education completed by each person. It would then be possible to compute an average level of educational attainment for a given population group, as discussed below.

CLASSIFICATION BY SEX AND AGE

It goes without saying that data on educational attainment should always, if possible, be classified by sex, since the differences between the sexes may be quite significant. The usefulness of such data is further increased if they are given separately for different age groups.[1]

The question arises: What should be the minimum age level of tabulations on the educational attainment of the population? The answer depends partly on the age level of the population to which the question is addressed, and partly on the nature of the data to be tabulated. In the majority of cases, a minimum age level is specified in the census schedule or instructions regarding the question on educational attainment. This age limit may be as low as 5 years (as in Mauritius, 1952; USA, 1950; etc.), or as high as 15 years (as in Norway, 1950). Other age limits used in recent censuses were: 6 years (as in Cuba, 1953; Italy, 1951, etc.), 7 years (as in Panama, 1950; Portugal, 1950, etc.), 10 years (as in Yugoslavia, 1953), 13 years (as in the United Kingdom, 1951), 14 years (as in Austria, 1951). The lower age limits, between 5 and 10 years, are appropriate for tabulation of data which relate to persons whose education is either completed or in progress. If the tabulation is limited to persons whose education is completed, then the minimum level should not be less than 13 or 14 years.

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[1] See United Nations, *Demographic Yearbook, 1956*, table 18: 'Population by level of education, age and sex', pp. 550-85.

The number of age groups shown in the United Nations compilation varies from 4 for the Census of Fiji, 1946, to 10 for some of the countries in Europe, plus an additional category of 'age unknown' in some cases. If this question is to be limited to the population aged 15 years and over, then the age groups could be reduced to eight, as follows: 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, 65 years and over, age unknown. The reasons for recommending these particular age groups are the same as those given in Chapter III on statistics of illiteracy.

URBAN-RURAL CLASSIFICATIONS

Data on educational attainment have been published by urban-rural classifications in several countries. For example, Finland (Census of 1950) published these data separately for 'towns', 'market towns' and 'rural communes'.[1] Norway (Census of 1950) tabulated separate figures for 'towns' and 'rural districts'.[2] France (Census of 1954) presented data for 'urban areas, together with the non-agricultural population of rural communes' and for the 'agricultural population of rural communes'.[3] The Philippines Statistical Survey of Households, May 1956, classified the data into urban and rural areas, the former including 'chartered cities and provincial capitals, Metropolitan Manila and the *poblaciones* of municipalities other than provincial capitals'; while the latter included 'all *barrios* of municipalities except those of the provincial capitals'.[4] The United States of America (sample survey of 1952) tabulated the data separately for (a) 'urbanized areas', (b) 'other urban areas', (c) 'rural non-farm', and (d) 'rural farm'. The definition of urban and rural areas used in this survey was the same as that used in the 1950 census, but it differed substantially from that used in surveys and censuses before 1950.[5]

The problem of defining urban and rural areas, for international comparisons, has been mentioned in the previous chapter.

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[1] Finland, *1950 Population Census*, Vol. VIII: *Population by Birthplace*, Educational Level, Knowledge of Languages, . . ., Helsinki, 1958.

[2] Norway, *Population Census December 1, 1950*, Sixth volume: *Persons 15 Years of Age or More by Education*, Oslo, Central Bureau of Statistics, 1957.

[3] France, Institut National de la Statistique et des Etudes Economiques, *Recensement Général de la Population de Mai 1954: Résultats du Sondage au 1/20: Population, Ménages, Logements*, Paris, Imprimerie Nationale, 1956.

[4] Philippines, Bureau of the Census and Statistics, 'The Philippine Statistical Survey of Households, May 1956', *Bulletin*, Series No. 2, Vol. I, *Demographic and Socio-economic Data*, Manila, 1957.

[5] United States Bureau of the Census, *School Enrolment, Educational Attainment, and Illiteracy, October 1952*, Washington, D.C. 1953 (*Current Population Reports*, Series P-20, No. 45).

OTHER CLASSIFICATIONS

An example of classification by ethnic groups is found in the United States of America (Census of 1950), where distinction was made between the 'White' and 'Non-white' population. The 'White' population is further classified as: 'Native white, of native parentage', 'Native white, of foreign or mixed parentage', 'Foreign-born white'; and the 'Non-white' population classified as Negro, Indian, and Others. A special category is made for 'White persons with Spanish surnames (in 5 South-western States)'. Another example is from the Labour Force Survey of June 1954, in Israel, where data on educational attainment were tabulated separately for the Jewish and non-Jewish populations.[1] The United States also published tabulations of educational data according to marital status, employment status, labour force status, major occupational groups, and income levels. The Norwegian Census of 1950 also published these data by occupation, distinguishing between: (a) employers and self-employed workers (further classified by industry groups); (b) salaried employees (with details for some more important occupations); (c) foremen and workers (with details for some more important occupations); (d) persons economically non-active; and (e) persons of activity unknown or not adequately described.

Computation of percentages and medians

The data on educational attainment may be summarized in terms of percentages and medians, for the total population or for specified population groups. A problem may be presented by the cases of educational attainment not reported. This can usually be dealt with in one of two ways. Either a separate percentage is shown for the 'not reported' category, as was done, for example, by the United States Bureau of the Census, which tabulated the results of its sample survey of 1952 in the percentage distribution shown in Table 2 (adapted and abridged from the original table).

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[1] Israel, Ministry of Education and Culture, and Central Bureau of Statistics, *Standard of Education of the Population, June 1954*, Jerusalem, The Government Printer, 1958. (*Special Series*, No. 66).

TABLE 2. *Years of school completed by civilian non-institutional population 14 years old and over, by age and sex, for the United States, October 1952 (per cent distribution)*

Years of school completed	Male				Female			
	14-17	18-19	20-24	25 and over	14-17	18-19	20-24	25 and over
TOTAL	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
None	0.3	1.3	1.3	2.4	0.3	0.2	0.4	2.0
Elementary school								
1 to 4 years	3.1	4.1	3.7	7.9	1.4	1.4	1.6	5.8
5 to 7 years	16.5	5.7	8.8	14.9	11.1	5.4	6.1	14.0
8 years	24.8	7.7	10.5	20.2	22.3	6.4	7.5	19.5
High School								
1 to 3 years	52.2	33.8	22.8	16.6	60.0	25.0	21.3	17.8
4 years	2.6	35.3	29.5	20.7	4.2	50.3	44.5	26.8
College								
1 to 3 years	0.1	11.4	14.6	7.5	0.4	11.0	13.1	7.7
4 years	...	0.1	8.1	8.2	...	0.1	5.2	5.7
School years not reported	0.4	0.5	0.8	1.5	0.3	0.3	0.4	0.7

Alternatively, the percentage distribution may be made after excluding the 'not reported' cases, as was done in the 1954 survey of Israel. Table 3 is adapted and abridged from the table published by the Central Bureau of Statistics of Israel.

TABLE 3. *Jewish adults, aged 15 years and over, by sex and education, June 1954*

Level of educational attainment	Male		Female	
	Number	Per cent[1]	Number	Per cent[1]
TOTAL	*516 600*	*100.0*[1]	*507 900*	*100.0*[1]
Did not attend school	38 400	8.2	105 100	21.7
Did not complete primary education	149 500	31.8	117 700	24.2
Completed primary education	165 300	35.2	161 900	33.4
Completed post-primary education	93 400	19.9	88 900	18.3
Completed higher education	23 300	4.9	11 500	2.4
Others and not stated	46 700	.	22 800	.

[1] Percentages computed on the total population after exclusion of 'others and not stated'.

Where data on this subject are collected by the number of grades or years of school completed, a convenient way of averaging for the total population or for any given population group is to compute the median number of years of school completed, as is the practice in the United States of America. The 'median' is defined as the value which divides the distribution into two equal parts—one half of the cases falling below this value and one half of the cases exceeding this value. For example, the values of 'median school years completed' for the United States population (25 years old and over) shown in Table 4 are taken from the report of the 1952 survey.

TABLE 4. *Median school years completed by civilian non-institutional population, 25 years old and over, by area and sex*

Area	Both sexes	Male	Female
TOTAL	*10.1*	*9.7*	*10.4*
Urban	10.8	10.6	10.9
Urbanized areas	10.8	10.8	10.9
Other urban areas	10.6	10.3	11.0
Rural non-farm	9.7	9.2	10.2
Rural farm	8.5	8.3	8.7

V. *Statistics of educational institutions: concepts and definitions*

Some basic concepts and definitions

There are three basic elements in statistical reporting on the educational institutions. These elements relate to: (a) persons who are receiving the education; (b) persons who are responsible for dispensing the education; and (c) places where the educational programme is carried on. A fourth element, relating to the amount of money spent in connexion with the educational programme, will be discussed in the chapter dealing with statistics of educational finance.

Each of the three basic elements may be expressed numerically in various ways by appropriate statistics. For instance, the first element may be measured in terms of: (a) the number of those who are enrolled as pupils in a school or other type of educational institution ('statistics of pupil enrolment'); (b) the number or proportion of pupils, or children of school age, who are attending school on a given day ('statistics of school attendance'); (c) the number of pupils who sit for school examinations, and the number or proportion who pass (or fail to pass) these examinations ('statistics of school examinations'); (d) the number of pupils who may be expected to be enrolled in school in future years ('projections of school enrolment').

Similarly, statistical information concerning the second element may be given, for example, as: (a) the number of persons engaged by the educational system or institution, whether for administration, supervision, instruction or other duties ('statistics of educational personnel'); (b) the number of persons who are directly engaged, full-time or part-time, in teaching groups of pupils ('statistics of teachers'); (c) the number of teaching positions, filled or unfilled, which are established in a given school system ('statistics of teaching positions'); (d) the number of persons needed, and the number of persons available, for teaching positions in future years ('projections on the demand and supply of teachers').

The third element may be measured in terms of: (a) administrative units, such as universities, academies or school districts; (b) instructional units, such as schools, classes and sections; (c) physical units, such as school buildings, classrooms and laboratories.

For the sake of simplicity, we shall discuss these basic elements under the general terms of pupils, teachers, and schools. We shall examine each element in its various aspects and adopt certain terms with recommended definitions, before passing on to the problems of statistical classification and tabulation.

STATISTICS OF PUPILS (STUDENTS)

At some point a person becomes recognized as a pupil (or student), usually through the act of registration or enrolment, in a school or other type of educational institution. It is therefore not difficult to obtain a count of all pupils in a school at a given time. However, there are two main kinds of problem connected with the counting. The first kind of problem relates to the question: Who should be included in the count? The second kind of problem concerns the time and the method of counting.

Enrolment and attendance

Since a count of pupils must be primarily based on a school register, it is clear that all pupils whose names are in a school register, and have not been removed therefrom, should be counted. It is presumed that a school register, properly kept, will have removed from it the names of pupils who, for example, have died, been expelled or withdrawn, been transferred to another register, etc. On the other hand, it will have added to it the names of pupils who have registered late, been transferred from another register, etc. The result of such a count—whether in a single class, a single school, an entire city or country— is known as the pupil 'enrolment'.

Sometimes it happens that a particular pupil's name appears in more than one register. Before adding up the enrolment in different classes to get a total for the school, or adding up the enrolment in different schools to get a total for a school system, it would be well to verify that there is no 'double counting'.

There may be circumstances under which double counting cannot be avoided altogether. This occurs most frequently in institutions of higher education, where students may be registered at the same time in more than one faculty or department. In such cases, the total enrolment of a university should not be obtained by the addition of the separate enrolments in the various faculties or departments, but should, if possible, be based on some central registry for the whole university. Thus the statistics of enrolment in universities and colleges of Canada show separate enrolments by courses, and total enrolments by sex, 'less duplicates'.[1] On the other hand, the statistics on higher education in Belgium show the total number of 'students enrolled' as well as the total number of 'enrolments', the difference between the two representing the number of students enrolled in more than one course.[2]

A difficulty of another sort occurs when students are enrolled in more than one institution, as for example in France, where it is estimated that about 20 per cent of students enrolled in the various specialized institutions of higher education (*les grandes écoles*) are also enrolled in the university faculties.[3]

The result of a count as described above may be called 'net enrolment', as distinguished from 'gross enrolment', which may refer to total enrolment without deduction of transfers, withdrawals, etc., on the one hand, and without elimination of double counting on the other hand.

Depending on the time of counting, the total enrolment may be specified as the 'initial enrolment' (if taken at the beginning of a school year or term), or the 'final enrolment' (if taken at the end of a school year or term). If the count is taken at a specified date during the school year or term, it may be called a 'census enrolment' or the result may be given as 'enrolment at such and such date'.

For certain purposes it may be useful to take an average enrolment over the school year or term, based on an averaging of the daily enrolments during each week, month, quarter, term or year.[4]

Besides the various ways of counting pupils enrolled, a number of countries—mainly in the Western Hemisphere—also count the number of pupils in attendance each day, and derive from this an average daily attendance. This measure as used in the United States of America is defined as follows: 'In a given school year, the average daily attendance for a given school is the aggregate days attendance of the school divided by the number of days the school was actually in session. . . . The average daily attendance for groups of schools having varying lengths of terms is the sum of the average daily attendances obtained for the individual schools'.[1]

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[1] Dominion Bureau of Statistics, *Fall Enrolment in Universities and Colleges* (annual publication).

[2] Fondation Universitaire, *Rapport Annuel.*

[3] Bureau Universitaire de Statistique, 'Statistique des Établissements d'Enseignement Supérieur et Technique Supérieur, 1956-57', *Annexe Statistique au Feuillet Documentaire* (F.D. 766, November 1957), pp. 1-16.

[4] For a discussion of various methods used for enrolment statistics in Australia, Canada, New Zealand, Union of South Africa, United Kingdom and the United States of America, see: Australian Council for Educational Research, *Comments and Suggestions on Educational Statistics compiled by Educational Departments in Australia* (revised April 1947), pp. 7-9.

For purposes of international reporting, it is suggested that the number of pupils be given in terms of 'net enrolment' at a given date, preferably near the end of the school year or term. The following definition of a pupil (or student) is recommended:

> '*A pupil (student) is a person enrolled in a school for systematic instruction at any level of education.*'

The reason for the use of the alternative terms, pupil and student, is that in certain countries it is customary to use the term 'pupil' in connexion with lower levels of education, and to reserve the term 'student' for use in connexion with universities and other institutions of higher education. In international reporting, there is no reason why these terms could not be used interchangeably, especially when more than one level of education is involved.

Full-time and part-time pupils

At the different levels of education, usually above the primary, the problem of counting full-time and part-time pupils or students arises. In fact, there are two types of problem involved. The first concerns the distinction which exists in many countries, particularly in Europe, between full-time education, which is practically universal at the primary level, but highly selective at the secondary and higher levels, and part-time education, either voluntary or compulsory, which is provided for a substantial and increasing number of young people and adults. For example, in Belgium the number of pupils receiving part-time vocational education at the secondary level is now about two-fifths the total number of pupils receiving secondary vocational education.[2] In the Netherlands, the number of pupils in part-time vocational schools and courses is nearly equal to the number receiving full-time vocational education.[1] In Germany, school attendance is compulsory from the age of 6 to 18, at least eight years being spent in full-time education and the remainder in part-time education. Hence, the part-time vocational secondary schools (*Berufsschulen*) now enrol more than eight times as many pupils as the full-time vocational secondary schools (*Berufsfachschulen* and *Fachschulen*).[2]

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[1] Office of Education, *The Common Core of State Educational Information*, Washington, D.C., Government Printing Office, 1953, p. 3. (*State Educational Records and Reports* series, Handbook I).

[2] *Rapport Succinct du Ministère de l'Instruction Publique sur le Mouvement Éducatif pendant l'Année Scolaire 1957-1958*, Report presented to the twenty-first International Conference on Public Education, Geneva, July 1958.

It is obvious that, in such circumstances, enrolment in part-time schools must be included in the current school statistics, even for international reporting. However, in most countries where part-time education has developed in other ways, or has not developed to the same extent, there is still the distinction between full-time pupils (students) and part-time pupils (students), possibly attending the same institutions. For example, Table 5 shows, for England and Wales, the number of students attending all grant-aided establishments for further education in 1957-58.[3]

TABLE 5

Type of establishment	Full-time students	Part-time day students	Evening students
Major establishments (other than Art)	76 876	449 845	896 549
Art establishments	13 380	35 474	99 003
Evening institutes	—	—	977 335
TOTAL	90 256	485 319	1 972 887

Another example is from the United States of America, where undergraduate enrolment in all institutions of higher education, reported in November 1955, included approximately 20 per cent 'part-time' students in publicly controlled institutions and 25 per cent 'part-time' students in privately controlled institutions.[4]

It would thus seem important to report separately on the numbers of full-time and part-time students for each level and type of education where the distinction is applicable. In most cases, this would apply particularly to secondary vocational and to higher education.

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[1] Central Bureau of Statistics, *Statistics of Technical and Home Economics Training, 1957-1958*, Zeist, 1958.

[2] Statisches Bundesamt, 'Die berufsbildenden Schulen im Bundesgebiet und in Berlin (West) im Jahre 1956', *Statistische Berichte*, Arb.-Nr. VIII/15/8, Wiesbaden, June 1958.

[3] *Education in 1958:* Report of the Ministry of Education; statistics of public education for England and Wales. London, HMSO, 1959.

[4] Office of Education, Statistics of Higher Education: 1955-56; Faculty, Students, and Degrees', *Biennial Survey of Education in the United States, 1954-1956*, Washington, D.C, Government Printing Office, 1958, Chapter 4, Section I.

It is not easy to find a definition of full-time pupil or student suitable for international reporting. In Canada, the Conference on Statistics of Higher Education, 1955, adopted the following definition: 'A full-time student shall be defined as one whose primary occupation is attendance at a college or university for approximately a prescribed year's work.'

The United States Office of Education, in requesting information on full-time and part-time students of certain categories, recommends the following definitions: 'A full-time student is one who is carrying at least 75 per cent of a normal student-hour load.' [The normal student-hour load is the number of credit-hours required for graduation, divided by the number of semesters or terms normally taken for graduation (exclusive of summer sessions).] And: 'A part-time student is one who is carrying an academic schedule lighter than that of a full-time student.'

Some such definitions probably exist also in other countries, at the secondary as well as higher education levels. A generalized form of the definition (for full-time and part-time pupils) is now recommended for international reporting, as follows:

'*A full-time pupil* (*student*) *is one who is enrolled for full-time education for a substantial period of time.*'

'*A part-time pupil* (*student*) *is one who is not a full-time pupil* (*student*).'

Grade and class

The counting of pupils within a school may be done by grade or by class. The grade, or year of study, is a unit in the vertical organization of a school. It is a step on the 'educational ladder'. The class is a unit in the horizontal organization of a school. It is the instructional unit which relates the pupils to the teacher on the one hand and to the classroom on the other hand. In a very small school, such as a one-teacher or two-teacher school in a rural community, there may be pupils of several grades grouped in the same class. In a large school, there may be several classes of pupils belonging to the same grade.

This distinction is not always clear in those countries where terms such as 'grade' and 'class', or their equivalents, have been used traditionally in other ways, or used interchangeably without clear definitions. For example, in the United Kingdom, 'the subdivisions within the schools, usually called classes, are generally designated in years'.[1] On the other hand, in Ceylon, 'the term standard is in general used for a period covering a year's work'. In India, 'the subdivisions of the primary school may be known as class, grade, standard or form'. Also in Australia, 'the terms class, grade or standard are used in various States, and in general are interchangeable, each representing one year's work for the normal child'. But in the Bahamas, we are told, the primary course is 'divided into three stages of three years each: preparatory (classes 1-3), junior (grades 1-3), and senior (grades 4-6)'. In New Zealand the primary course of eight years is given in the infant department (primers 1-4), the main primary school (standards 1-4) and the intermediate school (forms I-II). In the Federation of Rhodesia and Nyasaland, as in many other British territories, we find the term standards used at the primary school level, and the term forms at the secondary level. In France, and in most of the countries following the French school system, the term *classe* is used to designate the successive stages of schooling from the beginning of the primary to the end of the secondary level. The same term is also used in the sense of a group of pupils instructed together by a teacher.

In the Spanish-speaking countries of Latin America, the term *grado* is used variously: (a) as the equivalent of one year's work (e.g., Argentina, Panama, Puerto Rico, Venezuela, etc.); (b) as a stage of instruction covering two or three years (e.g., Bolivia, Chile, etc.); or (c) to designate the level or type of primary school (e.g., Peru, Uruguay—*de primer grado* [incomplete primary school], *de segundo grado* [complete primary school]). The term *curso* is most commonly used to mean a year's work in primary education; while *año de estudios* is the term used in most countries with the same meaning at the secondary and higher education levels.

In order to keep a clear distinction between the two basic concepts of grade and class, the following definitions are recommended for purposes of international reporting:

'*A grade is a step of instruction usually covered in the course of a school year.*'

'*A class is a group of pupils (students) who are usually instructed together during a school term by a teacher or by several teachers.*'

STATISTICS OF TEACHERS

The count of teachers may be obtained either from some central register or by adding together the reports from individual schools and institutions. The time of counting should coincide with the counting of pupils enrolled, preferably at or near the end of the school year or term. The statistics may refer to the 'number of teachers in service' or the 'number of teaching positions existing'. At any given moment, these two numbers are likely to be different, owing to such factors as unfilled vacancies, substitute teachers, teachers who fill more than one position at the same time, etc.

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[1] This and most of the other examples used in this chapter are taken from Unesco, *World Survey of Education*, Paris, 1955, 1958.

While it may be easier, from an administrative point of view, to obtain statistics on the number of teaching positions, the actual number of teachers in service is much more useful. For example, the number of men and women teachers, or the number of teachers by qualification, can usually be found only if the count is based on the 'teachers in service' concept. In any case it is important that school authorities should state clearly in their statistical reports whether their statistics on teachers relate to 'teachers in service' or to 'teaching positions'.

Teachers and other personnel

One of the problems in the counting of teachers—whether as teachers in service or as teaching positions—has to do with the inclusion or exclusion of non-teaching personnel engaged by the school system or institution concerned. The entire staff employed by a school system may include many different types of persons, such as: (a) superintendents of schools, or chief education officers, and their deputies, assistants, inspectors, etc. ('administrative personnel'); (b) principals, supervisors, teachers, school librarians, guidance personnel, psychologists, etc. ('instructional personnel'); (c) school physicians, dentists, nurses, and other professional and technical persons dealing with the physical and mental health of the pupils ('health personnel'); (d) secretaries, clerks, custodians, watchmen, and other types of persons concerned with the administration; operation and maintenance of the school buildings; transportation, food and recreational services, etc. ('auxiliary personnel').

It is obvious that a complete count of all personnel employed by the educational system may be necessary from time to time for budgetary and planning purposes. But the chief item of interest in current educational statistics is the number of teachers, not including other instructional personnel such as principals, librarians, psychologists, etc. If, however, a principal or school librarian has at the same time regular teaching functions, then he should be counted as a teacher, perhaps as a part-time teacher (see below).

In this connexion, the United States Office of Education defines a 'teacher' as 'a person employed to instruct pupils or students in a situation where the teacher and his pupils or students are in the presence of each other'. (This term is not applied to librarians or other instructional personnel.) However, the requirement that the teacher and his pupils should be in the presence of each other may be difficult to apply in all cases, for example, in education by correspondence (as in Australia, Canada and many other countries), by radio broadcasting (as in Colombia), and by television (as in the USA).

The definition recommended for international reporting is the following:

'*A teacher is a person directly engaged in instructing a group of pupils (students). Heads of educational institutions, supervisory and other personnel should be counted as teachers only when they have regular teaching functions.*'

Full-time and part-time teachers

Another difficulty which commonly occurs is that of dealing with full-time and part-time teachers. First, there are persons who do not spend their entire working time in connexion with schools, or with organized education. Secondly, among those who are full-time employees of the school system, there are many whose functions as teachers occupy only part of their working time. At the level of higher education, it is often difficult to separate the teaching functions from other related functions such as research and professional activities. Nevertheless, any analysis of the teaching force must take up the distinction between full-time and part-time teachers.

The normal work load of a teacher is often specified in the school laws and regulations of a country. Thus, for example, in Czechoslovakia, teachers in the first to fifth grades are required to teach for 26 hours a week; in the sixth to eighth grades, 24 hours a week; in the ninth to eleventh grades, 21 hours a week. In Iceland, teachers in primary schools must teach 36 periods a week; in lower secondary schools, 30 periods a week; in higher secondary schools, 27 periods a week. Each period is 40 minutes in primary schools and 45 minutes elsewhere. In Ceylon a teacher has to teach for a minimum of 20 hours a week. In Bulgaria, elementary and intermediate school teachers teach between 22 and 24 hours per week.[1] In such cases, teachers who teach less than the required number of hours per week may be reported as part-time teachers; in fact their teaching load may be translated into the equivalent of full-time teaching loads.

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[1] More detailed information on the required work load of teachers in different countries may be found in: Unesco/International Bureau of Education, *Primary Teachers' Salaries* (IBE Publication No. 147) and *Secondary Teachers' Salaries* (IBE Publication No. 157), Paris and Geneva, 1953, 1954.

For international reporting, it is not possible to apply any uniform criterion of work load to determine the full-time status of teachers, hence it is recommended that the following definitions should be used:

> '*A full-time teacher is a person engaged in teaching for a number of hours customarily regarded as full-time at the particular level of education in each State.*'
>
> '*A part-time teacher is one who is not a full-time teacher.*'

STATISTICS OF SCHOOLS

This element is chiefly of administrative importance, since the number of schools, together with the number of pupils, are involved in the appointment of personnel, and all three elements are related to the distribution of funds. An increase in the number of schools is generally associated with a growing population or a developing school system. A decrease in the number of schools, however, may indicate either a reduction in the size of the school-age population or a consolidation of small schools into larger units. The school as a statistical unit is of little use for international comparisons, since there is no constancy in the size of the unit. It may vary from a one-room, single-teacher school in a rural community to an institution comprising many buildings and housing thousands of pupils in a large city. However, since the count of schools is always of national interest, and the school is usually the basic reporting unit for the numbers of pupils and teachers, it would be useful to establish some uniformity in regard to statistics of schools used in connexion with international reporting.

The school as a reporting unit

The first distinction to be made is between a 'school establishment' (an administrative unit), a 'school building' (a physical unit), and a 'school' composed of a group of pupils—suitably defined as an instructional unit. The Swedish Royal Board of Education, for example, in the case of primary schools, asks for the number of school establishments, with the following instructions: 'As an individual school establishment will be reckoned every school building (i.e. building containing classrooms) which stands by itself and not in the vicinity of any other school building.

Two or more school buildings which stand close together will be reckoned as a single school establishment.' On the other hand, the United States Office of Education defines a school as 'a division of the school system consisting of a group of pupils composed of one or more grade groups, organized as one unit with one or more teachers to give instruction of a defined type, and housed in a school plant of one or more buildings. More than one school may be housed in one school plant, as is the case when the elementary and secondary programme are housed in the same school plant'.[1]

At the level of higher education, the term 'school' may be used to designate an independent institution (such as the *grandes écoles* of France), or a part of a university (such as a 'school of medicine' or 'school of journalism' in the USA). In the latter usage, it may be considered as equivalent to a 'faculty' or 'department'. In international reporting, it may be preferable to use the term 'institution' of higher education for a university, college, faculty, or school having an independent status or organization.

It is evident that statistics of school establishments and of school buildings have their own usefulness, but the main interest will be in the reporting of schools as instructional units. For this purpose, the following definition is recommended:

'*A school (educational institution) is a group of pupils (students) of one or more grades organized to receive instruction of a given type and level under one teacher, or under more than one teacher and with an immediate head.*'

Public and private schools

In most countries, some distinction is usually made in statistical reports between at least two types of school—those maintained or administered by an official or public body, and those maintained or administered by private bodies. This distinction does not exist in those countries where education is entirely financed and administered by the State (as in the USSR and most of the countries in Eastern Europe). Otherwise, the basis of distinction may be financial, or administrative, or a combination of the two. For example, in the United Kingdom (England and Wales), three types of schools are distinguished: 'maintained schools', in which the running costs are met out of public funds (buildings provided either out of public funds or by a voluntary body); 'direct grant schools', where buildings are provided and running costs are met by a voluntary body, but grants are received from the Ministry of Education based on the number of pupils; and 'independent schools', where buildings are provided and running costs are met entirely by a proprietor or voluntary body, and no grants are received from the government.

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[1] Office of Education, *The Common Core of State Educational Information*, op. cit.

In the Netherlands, a distinction is drawn between 'public education' which is imparted on behalf of the State or municipalities, and 'private education' which is imparted on behalf of private organizations. But, with the exception of university education, all public and private education in the Netherlands is fully financed by the government.

In the United States of America, the distinction between 'public' and 'private or non-public' schools is based on both administrative and financial grounds. Thus a public school is defined as 'a school operated by publicly elected or appointed school officials in which the programme and activities are under the control of these officials and which is supported by public funds'. A private or non-public school is 'a school established by an agency other than the State or its subdivisions which is primarily supported by other than public funds, and the operation of whose programme rests with other than publicly elected or appointed officials'.

In Belgium, public schools (*écoles officielles*) are under the control of the State or local authorities; private schools (*écoles libres*) are administered by institutions or individuals. However, private schools may be classed as 'adopted schools' (*écoles adoptées*) or 'adoptable schools' (*écoles adoptables*) if they meet certain conditions for receiving government subsidies. In other countries, such as India, private schools which do not conform to government standards or requirements are reported as non-recognized schools. In a few countries, such as Iraq and Lebanon, besides the public schools two categories of private schools are recognized—national and foreign—and statistics are presented separately for these schools.

In view of the many variations existing in different countries regarding the administration, control and support of schools, it is not possible to adopt a uniform classification of public and private schools. A reasonable degree of comparability may be obtained by the adoption of the following recommended definitions:

'*A public school is a school operated by a public authority (national, federal, state or provincial, or local), whatever the origin of its financial resources.*'

'*A private school is a school not operated by a public authority, whether or not it receives financial support from such authorities. Private schools may be defined as aided or non-aided, respectively, according as they derive or do not derive financial support from public authorities.*'

Other useful concepts and definitions

Passing beyond the basic elements of pupils, teachers and schools, we shall now examine some of the other concepts and definitions useful for statistical reporting on educational institutions. Much of the discussion which follows has a bearing on the recommended tabulation of school statistics which will be explained more fully in Chapter VII. Many of the terms used in the recommended tabulation are not otherwise defined or explained. While it is not yet possible to standardize the definition or usage of such terms, international comparability of school statistics could be much improved by giving more precise meaning to them in national tables.

SCHOOL-AGE POPULATION

To begin with, let us take the terms 'school population', 'school-age population' and 'compulsory school-age population'. The first of these terms is sometimes used as the equivalent of the total enrolment of pupils at all levels of education, or at given levels of education, such as primary school population or secondary school population. It refers to those who are receiving education at a given time and place. This term should not be confused with the second one—school-age population—which refers to the total number of persons in certain age groups, who should normally or ideally be receiving an education, but who may or may not be enrolled in school. The other term, 'compulsory school-age population' should mean precisely the number of persons who are obliged to receive an education, according to the laws of the country.

The total school population of a country may represent only 1 or 2 per cent of the entire population, as in some of the African territories. On the other hand, the proportion may be as high as 30 per cent or more, as in Puerto Rico and the Virgin Islands (USA). Apart from these extremes, and in general depending on the age structure of the population and the degree of educational development, the school population of a country may range from less than 10 per cent (as in Burma, India or Haiti) to more than 20 per cent (as in Japan, USA or Canada).

These proportions could give a rough idea of the extension of education among the entire population, but are obviously not adequate for detailed comparisons. A more satisfactory method is to relate the number of pupils enrolled at each age with the total population of the same age. For example, the Japanese Ministry of Education presents the number and proportion of the population enrolled in school, by sex and by single years of age between the 3-year-old and the age-group 30 years and over.[1] The Netherlands Central Bureau of Statistics publishes the same kind of information for age groups from 3 years to 26 years and over, showing further the number and percentage of persons in full-time and in part-time education.[2] Similar data for other countries are given in Unesco, *World Survey of Education*, Vol. II, Chapter II, 'School-age and School-going Population'.

In the United States of America, this type of information is regularly published for each census year, covering the population from 5 to 20 years old. At other times, more condensed tables are published, showing the population in certain age groups such as: 5, 6, 7-9, 10-13, 14-17, 18-19, 20-24, 25-29, 30-34 years.[3]

If the number of pupils enrolled in school is related to the population of a particular age group, this population may be called the 'school-age population', which has to be defined according to the educational system and the customs of each country. Where compulsory education laws are in force, the definition of the school-age population may be based on the requirements of compulsory education; in which case it may be called the 'compulsory school-age population'. More difficulty arises in countries where compulsory education laws are non-existent, not uniform for the entire country, or not uniformly enforced. In such cases, the only practical solution would be to take an arbitrary age group, and call it the 'school-age' population, because children and youth of these ages usually do go to school or may be expected to go to school.

For purposes of international reporting, an arbitrary age group might be chosen, such as 5 to 19 years, for measuring the relative extent of school enrolment among its 'school-age population'. This population might be subdivided, for example, into the following age-groups: 5 and 6, 7 to 9, 10 to 12, 13 and 14, 15 to 19 years. With these separate age groups, a number of combinations might be made for analytical purposes, as for example: 5-9, 5-12, 5-14, 5-19; 7-12, 7-14, 7-19; 10-14, 10-19. Further study and experimentation are needed with regard to the adoption of uniform age groups for the international reporting of the school-age population. For the time being, it is recommended that countries with provisions for compulsory education use a standardized definition as follows:

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[1] Ministry of Education, *Education in Japan: Graphic Presentation*, revised May 1957, Tokyo, 1957.

[2] Central Bureau of Statistics, *The Netherlands Youth and its Education, 1955-1956*, Zeist, 1957.

[3] See, for example: Bureau of the Census, *Current Population Reports*, Series P-20, No. 74.

> *'The compulsory school-age population is the total population between the age limits of compulsory full-time education.'*

The main point of this recommended definition is to limit its application to compulsory full-time education, even where the compulsory education laws include requirements of part-time education within certain age limits. The problems of non-uniformity within countries and of non-comparability between countries are still unresolved. In fact, the definition is useful only for measuring the effectiveness of compulsory education laws where they exist but are not fully enforced. Where they do not exist, the definition is obviously not applicable. Where they are fully enforced, the measurement is not necessary.[1]

ABSENTEEISM OF PUPILS

This term may be used in two different ways. It may apply, as in most of the Spanish-speaking countries of Latin America, to the situation where large numbers of children of school age are not enrolled in school, even though compulsory education laws do exist in those countries. Or it may be used, as in many other countries, to refer to those children who, though enrolled in school, are not attending in fact. In order to be quite clear in what sense the term 'absenteeism' is used, the relevant statistical tables should show, in the first case, the number and percentage of school-age children who are enrolled and those who are not enrolled in school. This is done, for example, in Ecuador, where it was shown that in 1955, among the population 6-12 years old, 67 per cent were enrolled, and 33 per cent not enrolled, in the primary schools of the country.[2] In the second case, the figures should show the number of pupils enrolled in school, and the number or percentage of those actually attending. For example, figures published this way in Haiti show for the school year 1956-57 an attendance rate of 86 per cent in urban primary schools and of 76 per cent in rural primary schools.[3]

WASTAGE AND RETARDATION

A problem which exists in many educationally underdeveloped countries is generally known as wastage. This is a combination of two factors—the premature dropping out of pupils before completing a course (say of four years or six years of primary school), and the repetition of grades, that is, when pupils are obliged to remain in the same grade and do the same work as in the previous year. The full measurement of these two factors requires a rather elaborate system of pupil accounting in which each child's year-by-year progress through school is recorded, for example on individual cards kept in a central office. But approximate results may be obtained by computing 'school retention rates' based on the comparison of enrolment figures, distributed by grade, over a sufficient number of years (at least equal to the number of grades at the level of education under consideration). For example, figures were published by Colombia, giving pupil enrolment, by sex and grade, separately for urban public schools, rural public schools, urban and rural private schools, each year between 1950 and 1955. Taking the 1950 enrolment in grade I as the base figure, the extent of wastage at each successive grade after the first was calculated by dividing the enrolment of grade II in 1951, of grade III in 1952, of grade IV in 1953 and of grade V in 1954 by the base figure. Another series of calculations was made using the 1951 grade I enrolment as base and proceeding in similar fashion. The results were shown separately for male and female pupils, and for each category of school.[1] The average retention rates arrived at for urban and rural public schools during the period 1950-1955 are shown in Table 6.

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[1] For details concerning the compulsory education laws of different countries, see: Unesco, *World Survey of Education*, Vol. I (1955) or Vol. II (1958).

[2] Ecuador, Ministerio de Educación, *Informe 1956-1957*, Quito, 1957.

[3] Institut Haïtien de Statistique, *Bulletin Trimestriel de Statistique*, No. 27, Port-au-Prince, December 1957.

TABLE 6

Grade	Urban public schools	Rural public schools
I	100	100
II	74	54
III	47	7
IV	29	1
V	17	0.2

It is not possible by this method to separate the effects of dropping out and of repetition. For instance, in the above example, the average enrolment in grade II in urban public schools was only 74 per cent of the average enrolment in grade I during the previous school year. But the loss of 26 pupils in each 100 represents the number who dropped out before reaching grade II, less the number of repeaters in grade II from the previous year. So the amount of wastage is really higher than is shown by the method of computation used. (The Colombia report also gives the number of repeaters and the number of pupils promoted, by grade.)

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[1] Colombia, Ministerio de Educación Nacional, *Estadística Cultural de 1955: Enseñanza Primaria* (*Boletín* No. 9), Bogota, 1956.

More detailed information concerning the movement of pupils in primary schools is published regularly by Mexico.[1] Figures are given, separately for urban and rural schools, and for each grade from I to VI, showing the gross enrolment (*alumnos inscritos*), the number of drop-outs (*bajas*) during the year, the net enrolment (*existencia*), the average attendance (*assistencia media*), pupils who sat for examinations (*alumnos presentados a examen*), those who did not sit for examinations (*no presentados a examen*), those who passed (*aprobados*) and those who failed (*reprobados*). When this information is accumulated over a period of years, it becomes possible to compute annual and average rates of dropping out during the year, absence from examinations, failure in examinations and dropping out between grades. The only element lacking for a complete analysis of the wastage problem is the number of repeaters in each grade. The results shown in Table 7, referring to rural primary schools in the whole country, are obtained by computation from the figures published for the year 1954.

TABLE 7

Element of wastage	Percentage by grade					
	I	II	III	IV	V	VI
Dropping out during year	9	7	9	10	10	9
Absence from examination	12	7	9	6	5	4
Failure in examination	27	15	14	13	13	8
Dropping out between grades (less repeaters in next higher grade)	29	29	48	43	9	—

From annual figures of this kind published for the period 1946-55, it may be estimated that a pupil entering the first grade in a rural primary school of Mexico, had an average expectation of completing less than two grades; in the urban schools the average expectation was less than 3.5 grades.

The repetition of grades, together with the effect of starting school later than usual age, results in what is commonly called retardation of pupils. This element may be measured by computing the median age of pupils enrolled in each grade and comparing it with the normal age for that grade. It can also be given in the form of a percentage representing the proportion of over-aged pupils in each grade. Since the enrolment count may be made at a date near the end of the school year, the majority of pupils may be expected to have an age at least a half-year, if not a whole year, above the normal age for entering the given grade. Hence a reasonable criterion for considering a pupil as over-aged may be set at 'two years or more above the normal age for the grade'. Thus, in the Unesco *World Survey of Education*, Volume II, a number of tables are included giving the age-grade distribution of pupils in primary schools, together with a median age computed for each grade, and the percentage of pupils two years or more above normal age. For instance, computed figures are shown for Chile, 1954 (See Table 8).

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[1] See: Dirección General de Estadística, *Anuario Estadístico de los Estados Unidos Mexicanos* (annual).

TABLE 8

	Grades					
	I	II	III	IV	V	VI
Median age of pupils	8.5	10.0	11.0	11.9	12.6	13.5
Normal age (assumed for each grade)	(7)	(8)	(9)	(10)	(11)	(12)
Percentage of pupils 2 years or more above normal age	39	49	50	47	39	36

SIZE OF CLASSES AND PUPIL-TEACHER RATIOS

A question of interest to the educational administrator is: What should be the ideal size of a class, say in a primary school, in a general secondary school, or in a vocational secondary school? This is the kind of question which cannot, and should not, be answered by the statistician, who can only provide figures on actual situations. Many countries have in their educational laws and regulations certain stipulations regarding the maximum size of classes, but practice is often at variance with these provisions. For example, in Argentina the regulations specify a maximum of 25 pupils for a class in primary school, but 'this requirement cannot always be observed owing to the constant increase in the school population and the shortage of adequate school premises; in some schools classes contain as many as 40 or 45 pupils'. In Panama, 'the law prescribes limits of 25-35 pupils per class, but in densely populated sections these figures are exceeded'. In England and Wales, the Ministry's regulations prescribe the maximum size of classes in primary schools as 40 pupils, but 'it has not been possible to avoid exceeding this in many schools'. In Japan, a class is supposed to be made up of no more than 50 children, according to the School Education Law, 'but some prefectures have issued regulations otherwise, and it is not unusual to find a class of over 60 children in urban schools'. In Turkey, the law also limits the size of a class to 50, but the situation is such that 'whilst some classes have less than 50 pupils, others have more than 70'. In Korea, the law sets 60 pupils per class as the maximum, 'but in practice some classes are larger because of the acute shortage of school buildings and of teachers'. Exceptionally, a country like Finland reports that the 'regulations fixing the maximum size of a class are binding, and no exceptions to them are allowed'; the prescribed maximum size is 34 pupils for classes in the first and second grades, and 40 for the other classes.

Among those countries where no regulations exist concerning the size of classes, Australia reports that the range would be from 20 to 60, the most usual size being between 40 and 45. In Austria, the average class size is said to have changed noticeably over the past decade, as shown in Table 9.

TABLE 9

Type of school	Average number of pupils per class	
	1945	1955
Volksschulen	46	32
Hauptschulen	35	31
Sonderschulen	17	16
All primary schools	44	31

In Denmark, no absolute maximum is prescribed ('except for the top class, which must not contain more than 30 pupils'), but the average number of pupils per class in an urban school is perhaps no more than 33, and in a rural school no more than 35. In Germany, it is stated that post-war stringencies often resulted in classes that were much too large —60 or over—but that a standard size of 45 is now aimed at, which will be reduced as soon as possible to 40, the optimum being held to be 30. In Iceland, the classrooms are never built larger than is comfortable for up to 30 children. 'In Reykjavik the average class is 27-28 children. In smaller schools, where one to three age classes must be taught in the same classroom, the size of class is seldom over 20.' In the United States of America there are no set regulations regarding size of classes, but it is recommended that the size be kept at 18-20 per class for the lower primary grades, and 25 for the middle grades. However, it is reported that the median class size for the elementary school is between 30 and 32, which is slightly larger than the recommended practice.

Where figures on size of classes are not collected, a rough approximation to the average class size may be found in the average pupil-teacher ratio. This ratio is obtained simply by dividing the total number of pupils by the total number of full-time teachers (or the total full-time equivalent of all full-time and part-time teachers). The easiness of obtaining this measure is offset by the difficulty of interpreting the result, because in averaging over many schools of different types, the significant variations are lost to view. Besides, for international comparisons the usefulness of pupil-teacher ratios is rather limited, since a wide range of such ratios may be found associated with countries at each stage of educational development. A low ratio of pupils per teacher may mean, for instance, that there are not enough pupils enrolled rather than that there is no shortage of teachers. Nevertheless, a decrease in the average pupil-teacher ratio over a period of time may be taken as a sign of educational improvement. For instance, for a group of 70 countries, the median pupil-teacher ratio in primary schools, which was 34 around the year 1950, dropped to 32 around the year 1954. This can only mean that there were more teachers in service in proportion to the number of pupils, which had increased markedly in all these 70 countries.

QUALIFICATION OF TEACHERS

This is a good place to examine the problem of the qualification of teachers. Essentially this is a question of quality rather than quantity and is therefore not suitable for statistical treatment. Yet the problem may be stated in such a way as to call for the compilation of figures which may be meaningful in particular settings. In most countries there are laws and regulations concerning the qualification of teachers, at least in the public schools.[1]

Teachers are usually required to have certain certificates or diplomas, although where there is a serious shortage of teachers many persons may be employed who do not have the necessary qualifications or certificates. For example, in Haiti, a study made in 1954-55 showed that only about one-third of all public school teachers had received any sort of professional training.[2] In India, 1955-56, of all teachers in schools for general education (public and private), nearly 40 per cent were reported as 'untrained'.[1] In Ceylon, 1957, about 27 per cent of all teachers were reported as 'uncertified', besides another 3 per cent classified as 'probationary teachers'.[2] In the United States of America, 7.3 per cent of the total teaching staff in public schools, in the fall of 1957, were reported as having 'sub-standard credentials'.[3]

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[1] For information on qualifications required of primary and secondary school teachers in various countries, see: Unesco/International Bureau of Education, *Primary Teacher Training* and *Secondary Teacher Training* (IBE publications 117, 149, 155), Paris and Geneva, 1950, 1953, 1954.

[2] Institut Haïtien de Statistique, *Bulletin Trimestriel de Statistique*, No. 22, September 1956.

There is, of course, no possibility of having a standard definition, for international purposes, of a qualified teacher, except to say that 'a qualified teacher is one who is considered qualified to teach according to existing laws and regulations of his country'. In a national table, the number of teachers may be given for each category of qualification (as in Ceylon, for example, using more than 30 different categories), or they may be reported simply as 'qualified' and 'non-qualified', 'trained' and untrained', etc., with an explanation of the meaning of such terms.

TEACHERS IN TRAINING

It may be useful to distinguish, for statistical purposes, at least three kinds of teachers in training: (a) those who are attending teacher training schools, hence should be reported as 'students' in such schools, even though they may be doing a certain amount of practice teaching as part of their training course; (b) those who are actually teachers in service, but at the same time receiving some 'in-service training' to become better teachers—they should be counted as 'teachers' and not as 'students'; (c) those who are at the same time 'pupils' and 'teachers' in the same school, or even at the same level of education. They may be called pupil teachers, monitors, apprentice teachers, etc. The essential question, in so far as it concerns international reporting, is whether these persons are to be counted as teachers or as pupils. It would seem more appropriate to include them as pupils at the appropriate level of education, and exclude them from the number of teachers—unless, in some particular instance, they have the legal status of teachers, receive salaries as teachers, etc. In such cases they might be considered as part-time teachers.

NATIONAL AND FOREIGN STUDENTS

Nowadays the considerable number of students studying outside their own countries is one of the significant aspects of international cultural

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1. Ministry of Education and Scientific Research, *Education in India, 1955-1956*, Vol. II, New Delhi, 1958.
2. *Administrative Report of the Director of Education for 1957*, Colombo, 1958.
3. Office of Education, *Fall 1957 Statistics on Enrolment, Teachers and Schoolhousing*, Washington, D.C., 1958.

exchange. In order to measure the extent and trends of this exchange, it would be useful to have the student enrolment, particularly in higher and technical education, reported by nationality or home country. Most of the European countries having large numbers of foreign students, such as Austria, France, Germany, Italy, Netherlands and Switzerland, do in fact classify their university students by nationality or citizenship. In the United Kingdom, information is regularly published in the *Commonwealth Universities Yearbook* concerning 'students from other countries', defined as those whose 'permanent home residence is overseas'. The Institute of International Education conducts an annual survey of foreign students in institutions of higher education in the United States of America. For this purpose, a foreign student is defined as 'a citizen of a country other than the United States who intends to return to his home country when his study period in the United States is completed.[1] Similarly, in Canada, the Conference on Statistics of Higher Education, 1955, agreed that: 'A student from outside Canada should be defined as one who is temporarily resident in Canada for the purposes of securing education.'

UNDERGRADUATE AND POST-GRADUATE STUDENTS

In many countries where higher education is sufficiently developed, a distinction is made between students preparing for a first degree and those who, having received their first degree, are working for a higher degree or diploma, or simply pursuing further study or research. For this purpose, the terms undergraduate and post-graduate student are generally used in such countries as Australia, Canada, New Zealand, United Kingdom and the United States of America. In the United States and Canada, the term graduate student is used interchangeably with post-graduate student.

FIRST-YEAR STUDENTS; FIRST-TIME STUDENTS

Where student enrolment in higher education is not classified by grade or year of study, it may be useful to have separately the number of first-year students, in order to compare them, for example, with the number of students completing secondary education. The term is not exactly equivalent to first-time students, as used for example in the United States of America, where it is defined as students 'who, in the current semester, term, quarter, or session, entered higher education for the first time (first time in any college)'.

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[1] See: Institute of International Education, *Open Doors, 1956, a Report on Five Surveys: Foreign Students, Foreign Doctors, ...* New York, The Institute, 1956.

SPECIAL STUDENTS AND OTHER CATEGORIES

At each level of education, there may be special categories of pupils or students who are reported separately from the regular pupils or students. As regards special schools and classes which may be provided for the general or vocational education of children who are physically handicapped, mentally handicapped, socially maladjusted, etc., we shall defer discussion until we come to the topic of special education, in Chapter VI. Where students are enrolled in regular schools and classes, but do not have the same status as the regular students, they may require separate treatment in statistical reporting. For example, in Austria, students in institutions of higher education are reported in three categories: *ordentliche Hörer* (regular students), *ausserordentliche Hörer* (special students) and *Gasthörer* (auditors). The last two categories constituted, in the winter semester of 1957-58, about 8 per cent of the total enrolment.[1] In Germany, the university students are classified as: *ordentliche Studienrende* (regular students), *beurlaubte Studienrende* ('students on leave status') and *Gasthörer* (auditors). The last two categories each account for about 3.5 per cent of the total enrolment in recent years.[2] In Italy, there is a category of *studenti fuori corso* (students who have completed their courses without obtaining a degree or diploma, or whose studies have been interrupted for some reason). They number about half as many as the regularly enrolled students (*studenti iscritti*).[3] In the United Kingdom, besides the full-time students and part-time students at the universities, there are 'students taking courses not of a university standard' and 'students attending extra-mural classes'. The full-time students are those reading for a first degree or first diploma, those engaged in research or other advanced work, and those attending courses not leading to a degree or diploma. The part-time students also include those reading for a first degree or first diploma, those engaged in research or other advanced work, and in addition, occasional students, i.e. persons taking intra-mural courses of lectures or laboratory instruction which, though of university standard and given by university teachers, do not lead to a degree or diploma. The full statistical returns for the academic year 1956-57 give the following numbers:[1]

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[1] Österreichisches Statistisches Zentralamt, *Österreichische Hochschulstatistik, Wintersemester 1957-1958*, Vienna, 1958.

[2] Statistisches Bundesamt, *Hochschulen und Lehrerbildende Anstalten*, Heft 1, *Die Hochschulen im Wintersemester 1955-1956*, Wiesbaden, 1958.

[3] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana, 1957*, Rome, 1958.

Full-time students: advanced, 13 379; first degree, 71 713; first diploma, 3 969; others, 805; total, 89 866.
Part-time students: advanced, 5 218; first degree, 1 664; first diploma, 1 070; occasional, 8 256; total, 16 208.
Students taking courses not of a university standard, 11 047.
Students attending extra-mural classes, 101 653.

Obviously, it would make a great difference in numbers if the last two categories were or were not included as university students.

In the United States of America, student enrolment in institutions of higher education is presented separately for resident students, extension students, and other enrolments. A resident student is 'one who takes his college work, either day or evening, on the main campus or on a branch campus of the institution, under the instructional staff of the institution. Where the student resides (whether on campus or off) and where the student is legally domiciled (whether in-State or out-of-State) are irrelevant'. He may be a 'degree-credit' student, full-time or part-time, or a 'non-degree-credit' student (adult education or terminal occupational education). Extension students may also be in degree-credit or non-degree-credit categories. The other enrolments include: correspondence students (those taking courses by mail, by radio or by television); short-course students (those taking courses which last considerably less than the regular semester, term, quarter or session in which they are given, but which offer instruction on at least four separate days); and students enrolled for individual lessons only (as in music, art, speech, etc.). Special and unclassified students are 'resident students who (a) are not candidates for a degree, diploma, certificate, or equivalent award, but (b) are taking courses of college grade in regular classes with other students who are working for a degree or similar formal award'. (Extension students, short-course students, correspondence students, or students enrolled for individual lessons only, are not included in the special and unclassified category.)

The above categories are shown in the report for 1955-56 with the following figures:[2]

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[1] University Grants Committee, *Returns from Universities and University Colleges in receipt of Treasury Grants, Academic Year 1956-1957*, London, HMSO, 1958.

[2] Office of Education, 'Statistics of Higher Education: 1955-1956. Faculty, Students, and Degrees', *Biennial Survey of Education in the United States 1954-1956*, Chapter 4, Section I, Washington, D.C., 1958.

Enrolment in November 1955 (all institutions, public and private)

Resident students			2 859 053
Degree-credit		2 661 473	
Undergraduate	2 410 241		
Full-time	(1 867 947)		
Part-time	(542 294)		
Graduate	251 232		
Non-degree-credit		197 580	
Adult education	161 437		
Terminal occupational	36 143		
Special or unclassified (included in the number of resident degree-credit students)		(151 275)	
First-time students (included in the number of resident undergraduate degree-credit students)		(709 451)	
Extension students			275 996
Degree-credit		195 490	
Non degree-credit		80 506	
Other enrolments			
Correspondence students			156 870
Degree-credit		102 467	
Non-degree-credit		54 403	
Short courses			58 419
Individual lessons			23 787

It may be seen that the category 'special or unclassified' students make up about 5.7 per cent of the total of all resident degree-credit students. The inclusion of extension students and other enrolments would bring the grand total of all types of enrolment to 3,374,125.

SCHOLARSHIPS, FELLOWSHIPS, BURSARIES, ETC.

In countries where education is not entirely free of direct cost to the student, it may be of interest to know how many students benefit from financial assistance provided in the form of scholarships, fellowships, bursaries, etc. Thus the United Kingdom presents the number of assisted students in universities, as those 'who hold scholarships, exhibitions or other awards, whether from public or private funds, providing wholly or in part for the payment of their fees or other expenses'. In Canada, annual lists are published of university entrance awards (undergraduate scholarships and bursaries open to students entering Canadian universities) and of awards for graduate study and research (post-graduate scholarships and fellowships open to Canadian students). It is reported that about 14 per cent of all Canadian undergraduate students and 29.4

per cent of graduate students received scholarships in 1956-57. In addition, 12.6 per cent of all students received bursaries; 5.5 per cent received other grants in aid; others again received contributions from National Defense, Reserve Officers Training Programme, Department of Veteran Affairs and other sources. A distinction is made in this report between scholarships awarded for academic achievements, and bursaries granted to able students because of need.[1] In Japan, it is reported that scholarship loans had been granted, as from 1957, to some 300,000 students (in upper secondary schools, junior colleges and universities) by the Japan Scholarship Society and other scholarship organizations.[2]

FIELD OF STUDY

In higher education, student enrolment figures are generally published for faculties, departments or schools, and also, in many countries, for fields of study. A faculty, in the traditional European sense, means one of a limited number of main divisions of a university; as for example, law, science, arts, medicine. A department or school, as used in the Anglo-Saxon countries, means a sub-division of a faculty, usually devoted to one particular branch of study, as for example, agriculture, economics, education, engineering, etc. A field of study is a specialization, generally within a particular faculty, department or school of the university. The classification of students by faculty, department or field of study varies widely from country to country. Examples of the practice in several countries will be given in Chapter VII, when we discuss the tabulation of enrolment statistics in higher education.

TERMINAL EXAMINATIONS, CERTIFICATES, DIPLOMAS AND DEGREES

The question of grade examinations and promotions is related to the problem of wastage as discussed above. Here we shall take up the question of terminal examinations and the related questions of certificates, diplomas and degrees. In most countries, a terminal examination or graduation examination is required at the completion of each level or stage of education. A pupil successful at such an examination is awarded a certificate, diploma or degree. Generally, a certificate may be awarded at the completion of any level or stage of education, a diploma may be given on completion of secondary or higher education, while a degree is only awarded at the level of higher education. For example, in France and in many other countries following the French educational system, a primary school certificate (*certificat d'études primaires*) is awarded after an examination held each year for all children who attain the age of 14 during the year. In England and Wales a General Certificate of Education is given to those who pass an external examination at the age of 16 ('ordinary level') or 18 years ('advanced level'), signifying the completion of their secondary education. In Switzerland a secondary school leaving certificate (*certificat de maturité*) is required for admission to higher education. In several countries, various certificates are given in certain branches of higher education, generally equivalent to diplomas. The term 'diploma' is used in some countries for certificates given at the completion of secondary education (e.g., high school diploma in the USA, *diplôme d'humanités* in Belgium, *diploma di maturita* in Italy, etc.). Elsewhere, it usually means a document testifying that the person has passed an examination at the university level, and proved his efficiency in some subject or group of subjects. Sometimes the course of study for a diploma is shorter, and the qualification less valuable, than a degree. In other cases, a diploma may signify a higher stage of accomplishment than the first degree (e.g. in France, a *diplôme d'études supérieures* usually requires one year of study after the *licence*).

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[1] Dominion Bureau of Statistics, *University Student Expenditure and Income in Canada, 1956-1957*, Ottawa, 1959.

[2] Japan, Ministry of Education, *Education in 1957*, Tokyo, 1959.

A university degree is 'a title conferred by the university as evidence that a student has attained a certain standard in a recognized branch of study'.[1] The first and lowest degree of a university may be a bachelor's degree (e.g. B.A., B.Sc., LL.B., M.B., B.Ed., B.Mus., etc.), although the term *baccalauréat* in French, or *bachillero* in Spanish, is used for the terminal examination of secondary education and should not be confused with a bachelor's degree in many English-speaking countries. After a bachelor's degree, a more advanced degree may be a master's degree (e.g., M.A., M.Sc.), or a doctor's degree (e.g. Ph.D., D.Sc., M.D., LL.D., Ed.D., Mus.D., etc.). In France, the first degree is likely to be a *licence* (e.g., *licence ès lettres, licence ès sciences*), followed by some kind of *diplôme* (e.g., *diplôme d'études supérieures*) or a *doctorat* (e.g. *doctorat ès lettres, doctorat ès sciences, doctorat en droit*). In Italy, there is a single standard degree, a doctorate (*laurea*) given after the completion of the prescribed studies and the passing of examinations. In Germany, the university studies lead either to a university diploma (after a *Diplomexamen*), a State certificate (after a *Staatsexamen*) or a doctor's degree (after a *Doktorexamen*).

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[1] See: International Federation of University Women, *International Glossary of Academic Terms*, Paris, 1939.

Thus it is clear that there is no uniformity with regard to university degrees or diplomas given in different countries, or even by different institutions in the same country. From the viewpoint of international reporting, the most useful way would be to show the number of students who received degrees or diplomas, distinguishing the various types of degrees and diplomas. In any case, it would be advisable to consider only the earned degrees, and not to include honorary degrees, which are frequently conferred by universities on distinguished persons whom they wish to honour.[1]

SCHOOL BUILDINGS AND FACILITIES; WELFARE SERVICES

From the viewpoint of administrators, statistics of school buildings and facilities are also important. The number and types of school buildings, the number of classrooms and laboratories, the existence and use of school libraries, playgrounds and athletic facilities, etc. may be presented in detailed statistical tables, which could also be of international interest. Similarly, statistics relating to the housing and feeding of students, their physical and mental measurements, and records of the school health services, guidance services, etc. are all useful for comparative studies. However, the information available at present concerning the methods of collecting such statistics in different countries is not sufficient for any general summaries or recommendations to be given here.

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[1] For detailed information relating to university degrees in 21 European countries, see: International Association of Universities, *Documents concerning the Equivalence of University Qualifications*, Paris, 1957.

VI. *Statistics of educational institutions: classification of schools*

Levels of education and types of organization

In the majority of countries, education is organized in such a way that three main levels may be recognized. For convenience, these may be called the levels of primary, secondary and higher education; or even more simply, the first, second and third levels of education. In certain countries, another level exists, which may be called the level of pre-primary education. On the other hand, since higher education does not exist everywhere, there may be only two levels—primary and secondary—in a few countries and in many of the non-self-governing territories. Each of the three main levels may be further divided into lower and higher stages, as for example: lower and higher primary; lower and higher secondary; junior and senior college.

The division between one level of education and another, however, is not always clear. First, because in a given school system there may be overlapping between the different levels of education, so that, for example, secondary education may begin at some point before the end of primary education. Secondly, because there may exist in the same system different patterns of progression from one level of education to another, such that, for example, pupils at a certain stage may continue their education either in a higher primary school, or in a lower secondary school, or in a vocational middle school. Furthermore, countries are often experimenting with different forms of school organization, so that old and new types of schools may exist side by side in the same country and within the same system, as for example, primary schools of 8 years' duration (followed by secondary schools of 4 years' duration) existing side by side with primary schools of 6 years' duration (followed by secondary schools of 6 years' duration). Finally, there often exist a variety of school systems in the same country, especially in a country with a federal form of government and a decentralized educational organization.

For all these reasons, it is obvious that any particular level of education in one country does not exactly correspond to the similarly-designated level of education in another country. Any comparison between countries must take into account the characteristics of the school system in each country, and also the selection of particular types of schools for inclusion at the given level of education. Nevertheless, a first step towards international comparability is to agree on the general principle of classification of schools by level of education, and on some kind of uniform definition for each of the levels. After that comes the problem of applying the classification and the definitions to the actual situation represented by the statistics in question. Before proceeding to an examination of the problems connected with the application of the recommended definitions at each level of education, let us first analyse the organization of schools in a number of selected countries. We shall use the respective diagrams reproduced (often in simplified form) in the *World Survey of Education*, Vol. II, as our basis for analysis, proceeding from the relatively simple cases to the more complex systems.

In the present school system of Japan,[1] a kindergarten or pre-primary school of 3 years precedes a primary school of 6 years, which is followed by a middle school or lower general secondary school of 3 years, which in turn leads to an upper secondary school of 3 or 4 years. After that the student may enter: (a) a university providing a complete range of higher education leading to the bachelor's, master's and doctor's degrees; (b) a junior college, providing 2 or 3 years of education, mainly vocational in nature, leading to a diploma; (c) a specialized training institution under the Ministry of Education, leading to a State examination and diploma, e.g., as a librarian or a trained nurse; or (d) a specialized training institution under some other ministry, e.g., Defense College, Police School, Training Institute for Communication Officials, etc. Thus we may distinguish in this system four levels of education, namely, the pre-primary (3 years), primary (6 years), secondary (3 years at lower stage plus 3 or 4 years at upper stage), and higher (all four types, ranging from 2 to 7 years' duration).

In the case of the Philippines,[2] (see Chart 1), an elementary school of 6 years is subdivided into a primary stage of 4 years and an intermediate stage of 2 years; this is followed by four parallel types of high school

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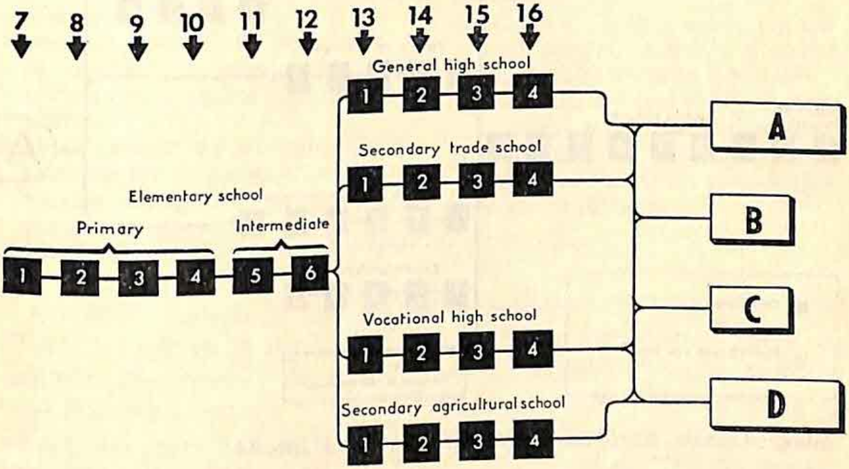
[1] See: *World Survey of Education*, Vol. II, p. 635.
[2] Ibid., Vol. II, p. 850.

(general, trade, vocational, agricultural), each of 4 years' duration. These schools lead to various types of public and private, degree-granting and non-degree-granting colleges and universities. We thus find three clearly defined levels of education in this system: first level (4 years primary plus 2 years intermediate), second level (4 years high school), and third level (college or university). Note that the first level in the Philippines system is of the same length as the first level in the Japanese system; but the second level in the Philippines system is only 4 years as compared with 6 or 7 years in the Japanese system.

CHART 1. *Organization of the school system in the Philippines*



Source: Unesco, *World Survey of Education*, Vol. II, p. 850.

GLOSSARY

elementary school: primary school.

general high school: secondary school with mainly general but partly vocational curriculum.

secondary agricultural school: vocational secondary school of agriculture.

secondary trade school: vocational training school for industry and trades.

vocational high school: vocational secondary school with multilateral course.

HIGHER EDUCATION

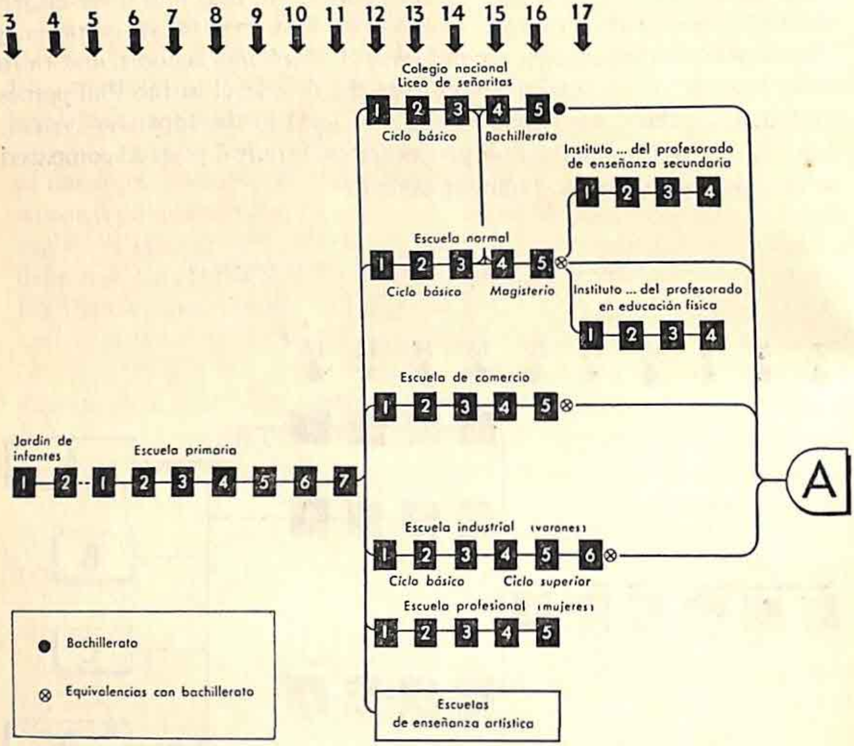
A. University of the Philippines.

B. Non-degree-granting colleges of agriculture, arts and trades, commerce and teacher training, administered by Bureau of Public Schools.

C. Degree-granting public colleges.

D. Private universities and colleges.

CHART 2. *Organization of the school system in Argentina*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Colegio nacional
Liceo de señoritas
Ciclo básico
Bachillerato
Instituto ... del profesorado de enseñanza secundaria
Escuela normal
Ciclo básico
Magisterio
Instituto ... del profesorado en educación física
Escuela de comercio
Jardín de infantes
Escuela primaria
A
Escuela industrial (varones)
Ciclo básico
Ciclo superior
Escuela profesional (mujeres)
Escuelas de enseñanza artística
● Bachillerato
⊗ Equivalencias con bachillerato

Source: Unesco, *World Survey of Education*, Vol. II, pp. 84-5.

GLOSSARY

bachillerato: see *colegio nacional, liceo de señoritas*. See also under 'Examinations'.

ciclo básico: see *colegio nacional, escuela industrial, liceo de señoritas.*

ciclo superior: see *escuela industrial.*

colegio nacional: general secondary school for boys with course comprising a lower or basic cycle (*ciclo básico*) (common to *colegio nacional, liceo de señoritas* and *escuela normal*) and an upper cycle (*bachillerato*) leading to higher education.

escuela de comercio: vocational secondary school of commerce, leading to qualification as book-keeper (*tenedor de libros*) after 3 years' study and commercial expert (*perito mercantil*) after 5 years' study.

escuela industrial: vocational training school for boys, preparing for entry into trades and industrial occupations, with courses comprising a lower cycle (*ciclo básico*), leading to qualification as a skilled workman (*experto*), and an upper cycle (*ciclo* *superior*) leading to qualification as a technician (*técnico*).

escuela normal: teacher training school, with course comprising a lower cycle (*ciclo básico*) of general secondary studies (common to *colegio nacional* and *liceo de señoritas*) and a specialized upper cycle qualifying for entry to the primary teaching profession (*magisterio*).

escuela primaria: primary school.

escuela profesional: vocational training school for girls preparing for women's trades and occupations.

escuelas de enseñanza artística: schools of fine arts, music, drama, and dancing.

instituto de formación del profesorado de enseñanza secundaria: teacher training college preparing secondary teachers.

instituto nacional del profesorado en educación física: specialized teacher training college for teachers of physical education.

jardín de infantes: pre-primary school.

liceo de señoritas: general secondary school for girls with course in two cycles as for *colegio nacional.*

magisterio: see *escuela normal above.*

HIGHER EDUCATION

A. *Universidades:* universities. The National University of Buenos Aires has faculties of agriculture and veterinary science, architecture, economics, engineering, law and social science, medicine, philosophy and letters, and science. There are seven other national universities.

EXAMINATIONS

bachillerato: baccalaureate, terminating general, secondary education and leading to higher education.

equivalencias con bachillerato: various examinations terminating courses at vocational or teacher training schools and regarded as equivalent to the baccalaureate.

A similar analysis of the school organization in Argentina[1] (see Chart 2), leads us to the finding that there are four distinct levels of education there: a pre-primary level (*jardin de infantes*, 2 years), a primary level (*escuela primaria*, 7 years), a secondary level (various types of school, 5-6 years, leading to the *bachillerato* or its equivalent), and a higher level (universities and teacher-training colleges). Thus in Brazil[2], we find a pre-primary level (*escola maternal* and *jardin de infancia*), a primary level (*escola primaria*, 4 years, plus *curso complementar*, 1 year), a secondary level (*ginasio*, *colegio*, *escola normal*, *escola comercial*, etc., 4-7 years), and a higher level (physical education, nursing and social service education, arts and science education, etc., 1-6 years).

These examples have been rather simple, because there is no overlapping between the levels, hence the demarcation is reasonably clear. Now let us take the system of the Union of Soviet Socialist Republics[3] (see Chart 3), where, after the kindergarten or pre-primary school, there are three main types of general education school: the 4-year primary

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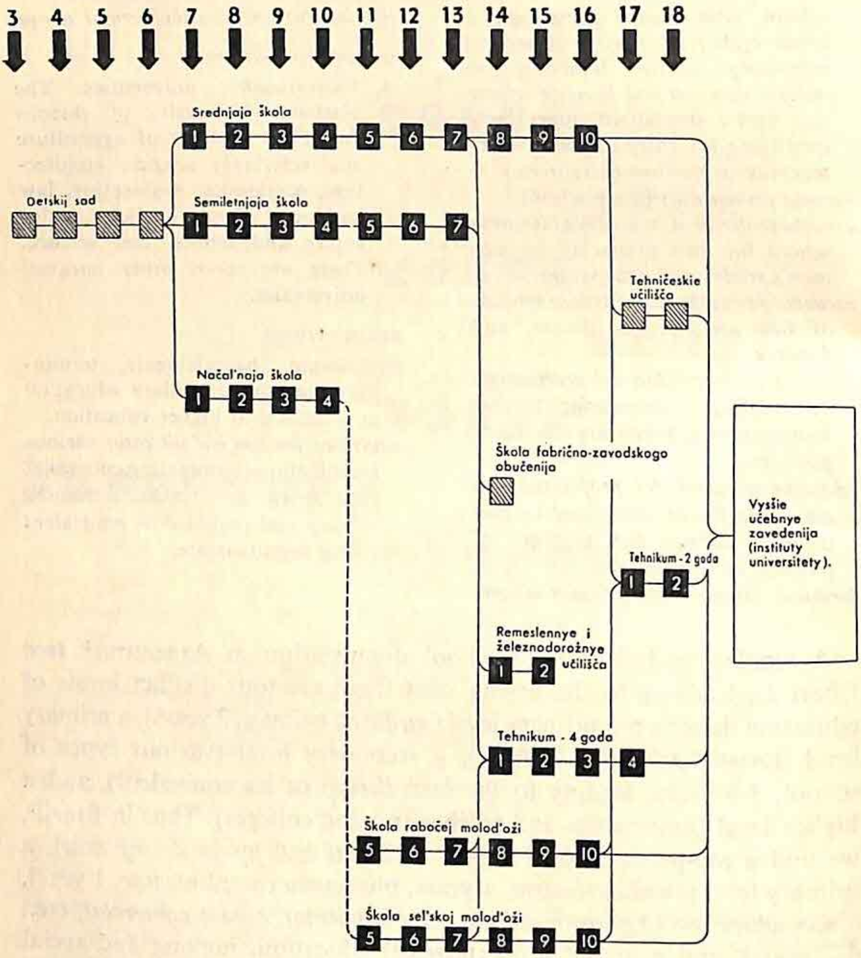
[1] *World Survey of Education*, Vol. II, p. 85.

[2] Ibid., Vol. II, p. 169.

[3] Ibid., Vol. II, p. 1021.

CHART 3. *Organization of the school system in the Union of Soviet Socialist Republics*



Source: Unesco, *World Survey of Education*, Vol. II, pp. 1020-1.

GLOSSARY

NOTE. Literal or conventional English translations are placed before the definitions.

detskij sad (kindergarten): pre-primary school.

načal'naja škola (elementary school): primary school.

remeslennye i železnodorožnye učilišča (trades and railway schools): vocational training schools with two-year course in skilled mechanical trades.

semiletnjaja škola (7-year school): school covering primary and lower secondary course.

škola fabrično-zavodskogo obučenija (factory school): vocational training school with one-year course in less complex skills than those taught at the trades and railway schools (see *remeslennye i železnodorožnye učilišča*).

škola rabočej molodjoži (school for working youth): part-time school providing general secondary education for young industrial workers who have completed only the 4-year school (see *načal'naja škola*) or 7-year school (see *semiletnjaja škola*).

škola sel'skoj molodjoži (school for rural youth); part-time school providing general secondary education for young agricultural workers who have completed only the 4-year school (see *načal'naja škola*) or 7-year school (see *semiletnjaja škola*).

srednjaja škola (secondary school): 10-year school covering the complete primary and general secondary course.

tehničeskie učilišča (technical schools): vocational training schools providing technical courses of 1-2 years' duration at post-secondary level.

tehnikum-2 goda (2-year technicum): vocational training school for technicians, admitting pupils who have completed the secondary (10-year) school.

tehnikum-4 goda (4-year technicum): vocational school for technicians, admitting pupils who have completed 7-year school; provides general secondary education in addition to the same amount of technical training as given in a 2-year technicum.

vysšie učebnye zavedenija (*instituty, universitety*): institutions of higher education (institutes, universities); courses last four to six years.

school, the 7-year school covering the primary and the lower secondary course, and the 10-year secondary school covering the complete primary and general secondary courses. In addition, there are the part-time schools providing general secondary education for young industrial workers and for young agricultural workers who have completed only the 4-year school or 7-year school. Furthermore, there are vocational training schools of 2 or 4 years' duration, admitting pupils who have completed the 7-year school; and technical schools of 2 years' duration, admitting pupils who have completed the secondary (10-year) school. Finally, there are institutions of higher education (institutes, universities) giving courses of 4 to 6 years. The question is, where do we draw the line between the levels of primary, secondary and higher education? Judging by the official statistics published by the government, the demarcation is taken to be at the end of the fourth year, and at the end of the tenth or eleventh year respectively.[1] However, a recent school reform (in 1958) appears to envisage an 8-year school of general education, compulsory for all children 7-15 years old, to be followed by various types of secondary and vocational schools of 1-3 years' duration, the latter qualifying students in some cases for entrance to higher education.

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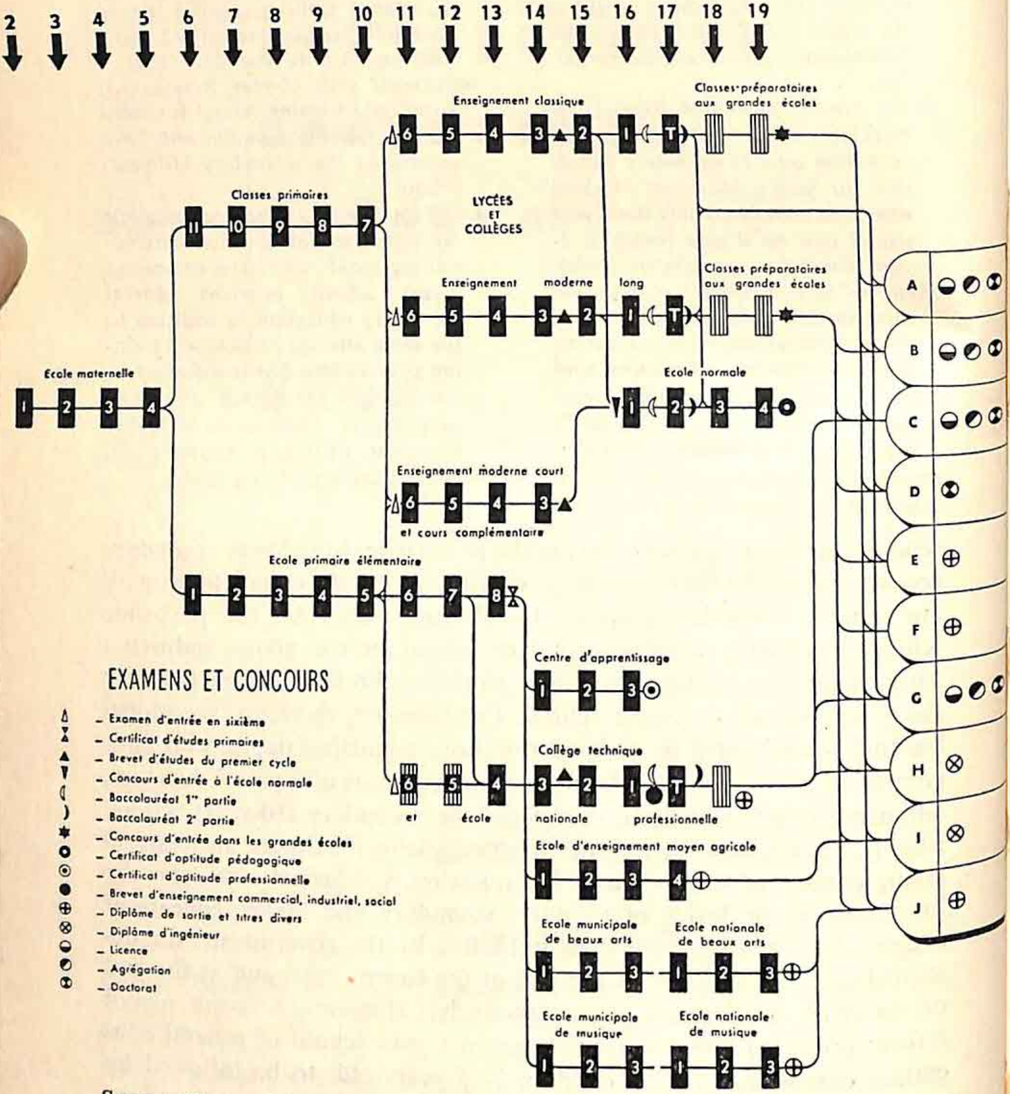
[1] USSR, Central Statistical Board, *Cultural Progress in the USSR: Statistical Returns*, Moscow, 1958.

CHART 4. *Organization of the school system in France*


2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Ecole maternelle
Classes primaires
Enseignement classique
LYCÉES ET COLLÈGES
Enseignement moderne long
Classes préparatoires aux grandes écoles
Classes préparatoires aux grandes écoles
Ecole normale
Enseignement moderne court
et cours complémentaire
Ecole primaire élémentaire
Centre d'apprentissage
Collège technique
et école nationale professionnelle
Ecole d'enseignement moyen agricole
Ecole municipale de beaux arts
Ecole nationale de beaux arts
Ecole municipale de musique
Ecole nationale de musique
A B C D E F G H I J
EXAMENS ET CONCOURS
△ – Examen d'entrée en sixième
⧗ – Certificat d'études primaires
▲ – Brevet d'études du premier cycle
▼ – Concours d'entrée à l'école normale
(– Baccalauréat 1re partie
) – Baccalauréat 2e partie
✸ – Concours d'entrée dans les grandes écoles
○ – Certificat d'aptitude pédagogique
⊙ – Certificat d'aptitude professionnelle
● – Brevet d'enseignement commercial, industriel, social
⊕ – Diplôme de sortie et titres divers
⊗ – Diplôme d'ingénieur
⊖ – Licence
◐ – Agrégation
⊛ – Doctorat

Source: Unesco, *World Survey of Education*, Vol. II, pp. 382-3.

GLOSSARY

NOTE. For the secondary schools (*lycées* and *collèges*) the numbering of the classes follows the traditional French system, beginning at the eleventh class and going up to the first, which is followed by a terminal class, shown as T, in which the pupil prepares for the second part of the *baccalauréat* (university entrance).

centre d'apprentissage: vocational training school for apprentices.

classes préparatoires aux grandes écoles: post-secondary classes attached to certain *lycées* and *collèges* for students preparing for the competitive entrance examinations to the *grandes écoles* (see below).

classes primaires: primary classes attached to a *lycée* or *collège*.

collèges: general secondary schools, sometimes with primary classes attached, which are established and partly maintained by local authorities at the level of the *commune*, and which are variously organized to provide classical courses (*enseignement classique*) or modern (*enseignement moderne*) or both.

collège technique: vocational secondary school; 4-year course trains workers who may become foremen, supervisors, etc., 6-7-year course leads to higher technical education.

cours complémentaire: continuation course provided at certain primary schools and corresponding to the lower cycle (first four years) of the *enseignement moderne*.

école d'enseignement moyen agricole: vocational secondary school of agriculture.

école maternelle: pre-primary school, or pre-primary classes attached to a primary school.

école municipale de beaux-arts (... de musique): municipal vocational training school of fine arts or music.

école nationale de beaux-arts (... de musique): State vocational training school of fine arts or music.

école nationale professionnelle: vocational secondary school; 5-year course trains skilled technicians, 7-year course leads to higher technical education.

école normale: teacher training college for primary teachers (separate institutions for men and women).

école primaire élémentaire: complete primary school covering the period of compulsory education.

enseignement classique: general secondary course with Latin and optional Greek, organized in two cycles of four years' general and three years' specialized studies respectively.

enseignement moderne: general secondary course without Latin, organized in two cycles of four and three years' respectively.

enseignement moderne court: the lower cycle (first four years) of the *enseignement moderne*.

grandes écoles: State higher professional colleges, attached to various ministries, the graduates of which become eligible for the more responsible posts in administration, education, science, technology, the armed forces, etc.

lycée: general secondary school, sometimes with primary classes attached, which are established and maintained by the central authorities with the assistance of departmental or municipal authorities, and which are organized to provide the classical course (*enseignement classique*), the modern course (*enseignement moderne*) or both.

HIGHER EDUCATION

A. *Études juridiques:* law.
B. *Études littéraires:* arts and letters.
C. *École normale supérieure:* institute

of education training secondary school teachers.

D. *Études médicales:* medicine and dentistry.
E. *Études de pharmacie:* pharmacy.
G. *Études scientifiques:* science.
H. *Grandes écoles scientifiques et techniques—écoles d'ingénieurs:* colleges of science, technology and engineering.
I. *Grandes écoles agricoles ou vétérinaires:* agricultural and veterinary colleges.
J. *Grandes écoles artistiques:* colleges of fine arts and music.

EXAMINATIONS

Agrégation: a competitive examination for recruitment to the higher posts in secondary and higher education.

Baccalauréat: university entrance examination, which is taken in two parts (*1re partie* and *2e partie*) at the end of the sixth and seventh years respectively of secondary education.

Brevet d'enseignement commercial, industriel, hôtelier, social: diploma awarded on the successful completion of studies in commerce, industrial arts, hotel management, social welfare.

Brevet d'études du premier cycle: lower secondary school certificate.

Certificat d'aptitude pédagogique: primary teacher's certificate.

Certificat d'aptitude professionnelle: certificate of vocational aptitude.

Certificat d'études primaires: primary school certificate.

Concours d'entrée à l'école normale: competitive entrance examination for teachers training college.

Concours d'entrée dans les grandes écoles: competitive entrance examinations for the *grandes écoles* (see above).

Diplôme de sortie et titres divers: leaving diploma and various qualifications.

Diplôme d'ingénieur: engineering diploma.

Doctorat: doctorate.

Examen d'entrée en sixième: secondary school entrance examination. Pupils in public schools with sufficiently high average mark during primary course are exempt.

Licence: licentiate. Holders of this degree in arts or science may, after two years' practical teaching obtain the *certificat d'aptitude pédagogique à l'enseignement secondaire* (general secondary teachers' certificate) or the *certificat d'aptitude pédagogique à l'enseignement technique* (technical secondary teachers' certificate).

Next we shall look at the system existing in France[1] (see Chart 4), which is also found, with modifications, in many other countries. There is an *école maternelle* (pre-primary level), followed by the *école primaire élémentaire* (primary level, 8 years). However, there are also *classes primaires* (primary level, 5 years) attached to a *lycée* or *collège* (secondary level, 7 years) leading to the *baccalauréat* and admission to higher education. In addition, pupils may leave the primary school after 5 years and take an examination for admission to a *lycée* or *collège*. Again, after 4 or 5 years of secondary education, pupils may be admitted by examination to an *école normale* (teacher training, 4 years, secondary level). There are also various types of vocational schools which may be entered by pupils after 5, 7 or 8 years in the primary school. Thus there is an overlapping of 3 years between the primary and secondary levels, since the primary school extends to 8 years but secondary education of one type or another may begin after 5 years of primary schooling.

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[1] *World Survey of Education*, Vol. II, p. 383.

The above examples show how difficult it is to classify schools by level in such a way as to be useful for international comparisons. Nevertheless it is recommended that, as far as possible, a classification be adopted to distinguish education by level as follows:

Education preceding the first level, which provides education for children who are not old enough to enter a school at the first level (e.g., at nursery school, kindergarten, infant school).

Education at the first level, the main function of which is to provide basic instruction in the tools of learning (e.g., at elementary school, primary school).

Education at the second level, based upon at least 4 years' previous instruction at the first level, and providing general or specialized instruction, or both (e.g., at middle school, secondary school, high school, vocational school, teacher training school at this level).

Education at the third level, which requires, as a minimum condition of admission, the successful completion of education at the second level, or evidence of the attainment of an equivalent level of knowledge (e.g., at university, teachers' college, higher professional school).

Classification of schools by level of education

EDUCATION PRECEDING THE FIRST LEVEL

This level of education is known variously as early childhood education, infant education, nursery education, pre-school education, pre-primary education, etc. It is usually provided for children from 3 or 4 to 5 or 6 years of age, before they are admitted to the regular primary schools. It is rather more concerned with the healthy development of the child physically, mentally, and socially than with the acquisition of specific knowledge and skills such as reading, writing and arithmetic. It should be distinguished from those provisions for taking care of young children outside their homes (such as the day nurseries in the United States of America or the crèches in some European countries).

This level of education is typically provided in nursery schools, *écoles maternelles*, kindergartens, and similar institutions. The following is a list of some of the various names used in different countries for schools at the pre-primary level:

børnehaver (Denmark)
casa das crianças (Portugal)
casa dei bambini (Italy, Switzerland).
daghem (Sweden)
dečji vrtić (Yugoslavia)
detska gradina (Bulgaria)
detskij sad (USSR)
école gardienne (Belgium)
école maternelle (France, Luxembourg, Canada, Haiti, etc.)
escola infantil (Portugal)
escola maternal (Brazil)
escuela maternal (Spain)
escuela de párvulos (Spain, Chile, Guatemala, Honduras, etc.)
gan yeladim (Israel)
grădinita de copii (Rumania)
hadanah (Jordan, United Arab Republic, etc.)
infant school (Australia, India, Pakistan)
jardim de infancia (Brazil)
jardín de la infancia (Colombia, Cuba, Dominican Republic, Peru, etc.)
jardín de infantes (Argentina, Ecuador, Paraguay, Uruguay)
jardín infatil (Chile)
jardín de niños (Honduras, Mexico)
Kindergarten (Austria, Germany, New Zealand, Switzerland, USA, etc.)
Kinderschule (Liechtenstein)
kleuterschool (Netherlands)
koudakestān (Iran)
lekskola (Sweden)
lastentarha (Finland)
madrasat al-ahdāth (Iraq)
mateřšká škola (Czechoslovakia)
nepiagogeion (Greece)
nursery school (Canada, India, United Kingdom, USA, etc.)
ovoda (Hungary)
özel ana okulu (Turkey)
przedskola (Poland)
scuola materna (Italy)
yo-chih-yuan (China)
yōchien (Japan)

It may be noted that this level of education is provided in some countries entirely by public authorities (as for example in Czechoslovakia and the USSR), in others, largely or only by private institutions (as for example in India and the Philippines), while in the majority of countries it is provided by both public and private bodies. In a few countries, such as Israel, attendance is compulsory for children at the age of 5 years. In most cases, it is voluntary. In the United Kingdom, compulsory education also begins at the age of 5 years, but children of this age are normally expected to attend infant schools which are considered as belonging to the level of primary education.

EDUCATION AT THE FIRST LEVEL

This is the basic level of education provided in all countries. As stated in the Universal Declaration of Human Rights, Article 26: 'Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory.' More than half of the countries in the world now have compulsory education laws which are carried out fully or in part. Where compulsory education is fully in effect, children can usually obtain their education without direct payment of fees, at least for the period of their compulsory schooling. This period varies from 3 or 4 years (as in Bulgaria, Laos, Philippines, Portugal, Thailand, Viet-Nam) to 10, 11 or 12 years (as in USSR, the United Kingdom and parts of Australia, Canada, Germany and USA). Elsewhere, the period of compulsory education may be 5, 6, 7, 8 or 9 years.

Education at this level is concerned mainly with the child's acquisition of the tools of learning—reading, writing and arithmetic—together with an elementary knowledge of his physical and social environment, while continued emphasis is given to the physical, mental, social and emotional development of the child. It is usually provided for children from the age of 5, 6 or 7 years until they reach the period of adolescence.

The length of primary education, whether compulsory or not, may vary from 4 to 9 years or more. There are however certain incomplete primary schools which provide only 2 or 3 years' instruction, as in some of the countries of Latin America, South-East Asia, and Africa. On the other hand, in some of the British territories, notably in the Caribbean area, what is called 'primary education' may extend to 10 or 11 years, since there is no clear division between the primary and secondary levels. In general, the first level of education is completed in not less than 4 years nor more than 8 years. The following is a list of names used in the different countries for some of the main types of primary school, classified according to the length of primary education provided:

(a) Schools providing primary education (complete) in 4 years

chung-sin hsüeh-hsiao (China)
escola primária (Brazil, Portugal, and Portuguese territories in Africa and Asia)
junior basic school (India)
načal'naja škola (USSR)
osnovna škola (Yugoslavia)
primary school (Albania, Bahrain, Burma, Gambia, India, Thailand)

(b) Schools providing primary education in 5 years

école primaire (Algeria, Lebanon, Monaco, Reunion)
école primaire du 2ème degré ordinaire (Belgian Congo, Ruanda-Urundi)
école primaire musulmane (Morocco)
escola primária, with *curso completar* (Brazil)
escuela primaria (Spain)
escuela primaria completa (Peru)
escuela primaria urbana (Colombia)
ibtidā'iyah (UAR: Region of Syria)
junior basic school (India)
ögretmenli şehir veya köy ilkokulu (Turkey)
primary school (India, Nepal, Pakistan)
scuola elementare (Italy, San Marino, Somali)

(c) Schools providing primary education in 6 years

barnskóli (Iceland)
dābestān (Iran)
demotikon scholeion (Greece)
école primaire (Belgium, Haiti, certain French territories in Africa)
école primaire complémentaire (Cambodia, Laos)
école primaire du 2ème degré sélectionné (Belgian Congo, Ruanda-Urundi)
école principale (French Cameroun)
elementary school (parts of Canada, Cyprus, Philippines)
escuela primaria (Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Panama, Puerto Rico, Venezuela)
escuela primaria común (Honduras)
escuela primaria de primera clase (Chile)
escuela primaria elemental (Cuba)
escuela primaria, primer ciclo (Dominican Republic)
escuela primaria superior (Nicaragua, Paraguay)
escuela de segundo grado (Uruguay)
gewoon lager onderwijs (Netherlands, Surinam, Netherlands Antilles)
hsiao hsüeh (China)
ibtidā'iyah (Iraq, Jordan, Saudi Arabia, UAR: Region of Syria)
junior basic school (India)
kukmin hakkyo (Korea)
kuo-min hsüeh-hsiao (China)
núcleo escolar campesino (Guatemala)
primary school (Afghanistan, parts of Australia, Ceylon, Ghana, India, Malaya, certain British territories in Africa, Asia and Oceania)
sekolah rakjat (Indonesia)
shōgakkō (Japan)
six-grade elementary school (USA, certain United States territories in America and Oceania)

(d) Schools providing primary education in 7 years

børneskole (Greenland)
école élémentaire (Canada)
école primaire (Tunisia)
escuela primaria (Argentina)
folkeskole (Denmark)
folkskola (Sweden)
landsbyskole (Denmark)
osnovno učilište (Bulgaria)
primary school (parts of Australia, Union of South Africa, United Kingdom and some of its territories in Africa)
scoala elementara (Rumania)
szkola podstawowa (Poland)

(e) Schools providing primary education in 8 (or 9) years

altalános iskola (Hungary)
al-awwaliyah, with *al-wusta* (Sudan)
beit sefer yesodi (Israel)
école primaire, avec *4ème degré* (Belgium)
école primaire élémentaire (France, Madagascar and other French territories)
elementary school (parts of Australia, Canada and USA, Liberia, parts of United Kingdom territories in the Caribbean region)
folkskola (Sweden)
Grundschule (Germany)
national school (Ireland)
osmiletá škola (Czechoslovakia)
Primarschule (Switzerland)
primary school (New Zealand, Nigeria, Federation of Rhodesia and Nyasaland, certain United Kingdom territories in South Africa)
primary school, with *middle school* (Ethiopia and Eritrea, certain United Kingdom territories in Africa)
scuola elementare (Switzerland)
varsinainen kansakoulu (Finland)
Volksschule (Austria, Germany)

EDUCATION AT THE SECOND LEVEL

This is the level of education built upon the basic instruction given at the first level, which provides for the various needs of the adolescent in preparation for his active and intelligent participation in the life of the community. It does not necessarily begin after the completion of primary education, but it should be based on at least 4 years of previous instruction—whether in a primary school or in preparatory classes attached to a secondary school. Where secondary schools overlap or run parallel to primary schools, it may be necessary, for purposes of international reporting, to assign to the first level of education that part of the secondary school course which corresponds to at least the first 4 years of primary education.

The nature of secondary education may be general or specialized. It may or may not lead on to higher education, at the third level. The age of pupils beginning their education at the second level is normally not less than 10 nor more than 14 years. The duration of secondary education varies even more widely than the duration of primary education, both from country to country and within the same country.

Here we shall distinguish between three types of education generally given at this level. First, there is the type of education provided for children who have completed all or part of the primary school course, but are not qualified or inclined to enter into specialized training for definite occupations. Thus their education must be general in nature, lasting either just long enough to bring them to the completion of their compulsory education, or else long enough to prepare them for admission to higher education. This may be called general education at the second level, and it may be subdivided into a lower stage and a higher stage. At the lower stage, which is mainly concerned with children in early adolescence (say between 10 and 15 years of age), it is not expected to include different types of instruction according to the interests and aptitudes of the pupils, though the pupils should have the opportunity to discover their own interests and aptitudes under the guidance of their teachers. At the higher stage, where children in late adolescence and early adulthood (say between 15 and 20 years of age) are prepared for taking their part in life, it is necessary to provide for some diversification in their education, in order to develop their potential abilities fully, according to their different interests and aptitudes.

The second type of education at this level is characterized by its specialization in order to prepare pupils directly for certain trades or occupations. This type of education, which may be called vocational education, may also be subdivided into a lower and a higher stage, but for practical purposes it would be more useful to distinguish between that type of vocational education which consists mainly in acquiring manual or mechanical skills connected with certain occupations, and another type which emphasizes the development of technical and scientific understanding necessary for the satisfactory performance of certain jobs below the professional level.

A third type of education at this level, which is in fact a special case of the second type, is the training of teachers, mainly for pre-primary and primary schools. Teacher training may be considered a kind of vocational education, but specialized in the preparing of pupils for the specific occupation of teaching. Because of this function, teacher training institutions are of particular interest and should be separately reported in educational statistics.

The following recommendation is made concerning the classification of education at the second level:

'*Where possible, education of the second level should be subdivided by type as follows:*

'(a) *General education, which does not aim at preparing the pupils directly for a given trade or occupation. Where appropriate, general education should be further subdivided as follows:* (i) *lower stage, in which general instruction is given, with orientation of pupils according to interests and aptitudes (e.g., at junior middle school, junior secondary school, junior high school); education at this stage may lead to various types of instruction at a higher stage;* (ii) *higher stage, in which some differentiation is provided in the types of instruction according to the interests and aptitudes of the pupils (e.g., at senior middle school, senior secondary school, senior high school).*

'(b) *Vocational education, which aims at preparing the pupils directly for a trade or occupation other than teaching. Where appropriate, vocational education should be further subdivided as follows:* (i) *education which is mainly practical;* (ii) *education which is mainly technical and scientific.*

'(c) *Teacher training, which aims at preparing the pupils directly for teaching*'.

It must be recognized that education at the second level is not organized in the same way in all countries, and that the subdivisions recommended may not be appropriate or possible in certain countries. That is why the words 'where possible' and 'where appropriate' are used in the recommendation. In the actual reporting of statistics at this level of education, much will depend on the existing types of school in each country. We shall now proceed to an examination of the different types of school providing education at the second level.

SCHOOLS PROVIDING GENERAL EDUCATION AT THE SECOND LEVEL

The following inventory of different types of school providing general education at the second level is not meant to be exhaustive but only illustrative. It will give the names of the principal types of school existing in different countries, classified by their relationship with the first level of education, according to the number of years of primary education prior to the beginning of each kind of school. The normal duration of schooling in each case is also shown in the parentheses.

(a) Schools providing general education at the second level, after 4 years of primary education:

Frauenoberschule (Austria, 8 years)
gimnazija (Yugoslavia, 8 years)
Gymnasium (Austria, 8 years; Germany, 9 years)
high school (India, 7 years, followed by *intermediate college*, 2 years)
högre flickskola (Sweden, 7 years)
klasična gimnazija (Yugoslavia, 8 years)
Liceu (Portugal, 7 years)
Mittelschule (Germany, 6 years, followed by 3 years in *wissenschaftliche Oberstufe*)
niža gimnazia (Yugoslavia, 4 years, followed by *visa gimnazia*, 4 years)
oppikoulu (Finland, 8 years)
osmogodišnja škola (Yugoslavia, 8 years, the first 4 of which at the primary level)
Realgymnasium (Austria, 8 years)
Realschule (Austria, 8 years)
realskola (Sweden, 5 years, followed by 3-4 years in a *gymnasium*)
secondary school (Thailand, 6 years, followed by *pre-university school*, 2 years)
semiletnjaja škola (USSR, 7 years, the first 4 of which at primary level)
srednjaja škola (USSR, 10 years, the first 4 of which at primary level)

(b) Schools providing general education at the second level, after 5 years of primary education

collège: enseignement moderne court (France, 4 years)
collège: enseignement moderne long (France, 7 years)
école complémentaire (Lebanon, 4 years)
école secondaire (Lebanon, 7 years)
école secondaire: section classique (Switzerland, 4 years, followed by *gymnase*, 3 years)
escuela secundaria (Colombia, 6 years)
escuela primaria: periodos de perfeccionamiento y de iniciación profesional (Spain, 5 years)
ginasio (Brazil, 4 years, leading to *colegio*, 3 years)
Gymnasium (Liechtenstein, 5 years)
high school (Pakistan, 5 years, followed by *intermediate college*, 2 years)

höhere Töchterschule (Liechtenstein, 4-5 years)
instituto de enseñanza media (Spain, 7 years)
lise (Turkey, 6 years)
lycée (France, 7 years)
middle school (Pakistan, 3 years)
mutawassiṭah (UAR: Region of Syria, 4 years, followed by *iʿdādiyah adabi* or *iʿdādiyahʿilmi*, 3 years)
ortaokul (Turkey, 3 years, followed by 3 years in *lise*)
osmiletá škola (Czechoslovakia, 8 years, the first 5 of which at primary level)
scuola media (Italy, 3 years, followed by *liceo* or *ginnasio*, 4-5 years)
střední škola (Czechoslovakia, 3 years, followed by *vyberova skola*, 3 years)

(c) Schools providing general education at the second level, after 6 years of primary education

academic secondary school (Australia, 5-6 years; Malaya, 6 years)
athenée (Belgium, 6 years)
beit sefer tikhon (Israel, 6 years)
chūgakkō (Japan, 3 years, followed by *kōtōgakkō*, 3-4 years)
chung hakkyo (Korea, 3 years, followed by *kodeung hakkyo*, 3 years)
chung hsüeh (China, 6 years)
colegio (El Salvador, 5 years)
colegio de humanidades (Ecuador, Paraguay, 6 years)
colegio de segunda enseñanza común (Peru, 5 years)
collège (Belgium, 6 years; Cambodia, 4 years; Haiti, Tunisia, 7 years)
collegiate school (Ceylon, 7 years)
cours complémentaire (Tunisia, 4 years)
dābîrestān (Iran, 6 years)
el dīnayah al-thānawiyah (Iraq, 5 years)
école moyenne (Belgium, 3 years; Belgian Congo, 4 years)
école primaire supérieure (Luxembourg, 3 years)
école secondaire générale (Belgian Congo, 6-7 years)
enseignement secondaire (Luxembourg, 6-7 years)
escuela secundaria (Costa Rica, Guatemala, 5 years)
escuela secundaria (Mexico, 5 years, followed by *bachillerato*, 2 years)
general high school (Philippines, 4 years)
grammar school (United Kingdom: Northern Ireland, 7 years)
gumnasion (Greece, 6 years)
gymnasium (Netherlands, 6 years; Switzerland, 6 1/2 years)
Gymnasium: Kurzform (Germany, 6-7 years)
higher secondary school (India, 6 years)
hogere burgerschool (Netherlands, 5 years)
högre folkskola (Sweden, 4 years, followed by 3 years in *gymnasium*)
iʿdādīʿām (UAR: Region of Egypt, 3 years, followed by *thānawīʿām* and *shuʿbat al-ādāb* or *shuʿbat al-ʿulūm*, 3 years)
instituto (Cuba, El Salvador, Honduras, 5 years)
junior high school (Canada, USA, 3 years, followed by *senior high school*, 3 years)
junior secondary school (Ceylon, 3 years)
junior-senior high school (Canada, USA, 6 years)
klein seminarium (Netherlands, 6 years)
liceo (Honduras, Venezuela, 5 years; Uruguay, 6 years)
liceo común (Chile, 6 years)
liceo intermedio (Dominican Republic, 2 years, followed by *liceo secundario*, 4 years)
liceo renovado (Chile, 6 years)
lukeion (Greece, 6 years)
lycée (Belgium, 6 years; Cambodia, Haiti, Tunisia, 7 years)
middle school (Ghana, 4 years; Malaya, 6 years)

middelbare school voor meisjes (Netherlands, 5 years)
midskóli (Iceland, 3 years, followed by *menntakoli*, 4 years)
Mittelschule (Germany, 4 years)
mutawassiṭah (Iraq, 3 years, followed by *iʿdādiyah adabi* or *iʿdādiyah ʿilmi*, 2 years)
national secondary school (Malaya, 6 years)
post-primary classes (Malaya, 2 years)
Realschule (Liechtenstein, 3 years)
realskola (Sweden, 4 years, followed by 3 years in *gymnasium*)
secondary intermediate school (United Kingdom: Northern Ireland, 4 years)
secondary school (Afghanistan, Ireland, 6 years)
sekolah menengah pertama (Indonesia, 3 years, followed by *sekolah menengah atas*, 3 years)
Sekundarschule (Switzerland, 3 years)
senior secondary school (Ceylon, 5 years)
thānawiyah (Saudi Arabia, 6 years)
thānawiyah mutawissitah (Jordan, 3 years)
thānawiyah tammah (Jordan, 5 years)
uitgebreid lager onderwijs (Netherlands, 3-4 years)
unglingaskóli (Iceland, 3 years, followed by *menntaskóli*, 4 years)

(d) Schools providing general education at the second level, after 7 years of primary education

bilateral school (United Kingdom: England and Wales, 7 years)
colegio nacional (Argentina, 5 years)
collège classique (Canada, 8 years)
comprehensive school (United Kingdom: England and Wales, 7 years)
école moyenne (Canada, 2 years)
école secondaire (Canada, 5 years)
école secondaire: section moderne (Switzerland, 2 years, followed by *gymnase*, 3 years)
framhaldsskole (Norway, 1-2 years)
gimnazia (Bulgaria, 4 years)
gymnasium (Norway, 5 years)
high school (Union of South Africa, 5 years)
junior high school (Union of South Africa, 3 years)
junior secondary school (United Kingdom: Scotland, 3 years)
liceo de señoritas (Argentina, 5 years)
liceum ogólnokształcace (Poland, 4 years)
Mittelschule (Germany, 3 years)
realskole (Norway, 3 years)
şcoala medie de 11 ani (Rumania, 11 years, of which first 7 at primary level)
secondary school (Union of South Africa, 5 years)
secondary grammar school (United Kingdom: England and Wales, 7 years)
secondary modern school (United Kingdom: England and Wales, 5 years)
secondary technical school (United Kingdom: England and Wales, 7 years)
senior secondary school (United Kingdom: Scotland, 5 years)
sredno učilište (Bulgaria, 11 years, of which first 7 at primary level)
szkola 11-letna ogólnokształcaca (Poland, 11 years, of which first 7 at primary level)

(e) Schools providing general education at the second level, after 8 years of primary education

általános középiskola (Hungary, 4 years)
beit sefer tikhon (Israel, 4 years)
colegio (Nicaragua, 5 years)
college preparatory high school (Liberia, 4 years)
four-year high school (USA)
gymnasium (Denmark, 3 years)

high school (Canada, New Zealand, 4-5 years)
instituto nacional (Nicaragua, 5 years)
jedenáctiletá škola (Czechoslovakia, 11 years, of which first 8 at primary level)
kitot hemshekh (Israel, 4 years)
liceo secundario (Dominican Republic, 4 years)
Oberschule (Germany, 4 years)
preparatory college (Ireland, 4 years)
secondary school (Ethiopia, 4 years)
al thānawiyah (Sudan, 4 years)

It may be noted that in many countries it would not be difficult to report separate statistics for schools of the lower and higher stages providing general education at this level. Where schools are named junior and senior secondary or high schools, the distinction is clear. In other cases, schools which are called 'higher primary', 'complementary', 'middle', 'intermediate', etc. may be classed as of the lower stage; while those called 'college preparatory' or 'pre-university' should obviously belong to the higher stage. Even in those cases where the schools are not classified or classifiable in this way, it may still be possible to report pupil enrolment (and perhaps number of teachers) separately for the two stages. For example, in the case of a 10-year school system, such as in the Union of Soviet Socialist Republics, grades 1-4 being reported as the first level, grades 5-7 may be counted as the second level, lower stage, and grades 8-10 as the second level, higher stage.

It would be advisable to avoid, as far as possible, including vocational schools and teacher-training schools in the statistics on general education at the second level.

SCHOOLS PROVIDING VOCATIONAL EDUCATION AT THE SECOND LEVEL

In most of the school systems, there is a clear distinction between schools providing general education and those providing vocational education. Usually, the schools providing vocational education at the second level are 'terminal schools', that is, they do not allow their pupils to pass on to schools of the third level, or they allow it only to a very limited extent. On the other hand, the schools of general education (except those which are definitely terminal in nature, such as the *Mittelschule* in Germany) generally allow their pupils to pass on, either to a terminal vocational school or to a school of the third level.

Vocational schools are sometimes found at the first level of education, that is, they are not based on at least 4 years of primary education. It would seem advisable to consider such schools as 'pre-vocational', and include them in statistical reports at the first level of education. On the other hand, certain types of vocational school may extend beyond the second level, and may even require the completion of secondary education as a condition of admission. In such cases, it would seem advisable to include such schools in the third level of education, or if possible, to split up the student enrolment into two parts, assigning the lower part to the second level and the upper part to the third level.

There are some school systems, as in Canada, the United Kingdom and the United States of America, where general and vocational education are usually given in the same schools, though perhaps in different courses. Consequently, it may not be possible to separate the pupils and teachers according to general and vocational education. There may, of course, be separate schools for certain types of vocational education, but the figures for these schools would represent only a small part of the vocational education actually provided in the entire school system. We could suggest no easy solution to this problem, unless it were possible to compile statistics of enrolment by courses and by subjects, which is hardly to be recommended for the international reporting of current school statistics.

We shall now examine some of the different types of school providing vocational education at the second level. Since there is a great variety of such schools in the different countries, we shall merely list a few illustrative types in each of the subject areas. They have all been taken from the diagrams showing the existing school systems, as reproduced in the *World Survey of Education*, Volume II, to which the reader is referred for further details.

(a) Schools providing vocational education in general

nastalt för lägre yrkesutbildning (Sweden, lower vocational training school for home economics, commerce, industry and trade, 1-4 years, after 8 years of primary school).

beit sefer miqzo'i (Israel, vocational secondary schools for industries and trades, and home economics, 4 years, after 8 years of primary school).

Berufsfachschule (Germany, full-time vocational secondary school, 2-3 years, after 9 or 8 years of primary school).

Berufsschule (Germany, part-time vocational school offering 6 to 12 hours per week of schooling; attendance compulsory for all youth under 18 years of age not enrolled in some other type of school).

centre de formation professionnelle (Tunisia, vocational training school, 3 years, after 7 years of primary school).

chih-yeh hsüeh-hsiao (China, vocational secondary school, 5-6 years, after 6 years of primary school).

collège technique (Cambodia, vocational secondary school, 3 years, after 6 years of primary school).

collège technique (Tunisia, vocational secondary school, 7 years, after 6 years of primary school).

école professionnelle (Belgian Congo, vocational training school with courses at three levels, leading from and terminating the corresponding courses at the *école technique;* the lower course trains skilled workers, the middle course, foremen, and the upper course, technicians).

école technique (Belgian Congo, pre-vocational secondary school, after 6 years of primary school, with 2-year courses at three levels, each leading to a final year of vocational training at the *école professionnelle*).

école technique (Canada, vocational secondary school, 4 years, after 7 years of primary school and 2 years of secondary school).

école technique secondaire (Belgium, vocational secondary school for industry, trade, commerce, agriculture, home economics, arts and crafts, etc., after 6 years of primary school; two levels may be distinguished: *degré inférieur* and *degré supérieur*, each 3 years).

erikoisammattikoulut (Finland, specialized vocational training schools, 3 years after 8 years of primary school and 2 years at the *valmistavat ammattikoulut*, see below).

erkek ve kiz; orta sanat okulu (Turkey, lower secondary vocational training schools, 3 years, after 5 years of primary school; may continue with 2 more years in a *sanat enstitüsü*, see below).

escuela vocacional (Chile, vocational training school, 3 years, after 6 years of primary school).

Fachschule (Austria, Germany, full-time vocational training school, 1-4 years, after 8 years of primary school).

höhere Abteilungen der technischen und gewerblichen Lehranstalten (Austria, vocational training schools, 3 or 4 years, after 2 years or 1 year in a *Fachschule*).

hospodářská škola (Czechoslovakia, vocational secondary school, after 8 years of primary school; with 4-year course preparing for entry to various branches of administration of national economic system, and a 2-year course for shorthand typists, clerks, etc.).

institutos laborales (Spain, vocational secondary schools, after 5 years of primary school, preparing for entry into specialized technical training schools).

madrasat al-ṣināʿah (Iraq, vocational training school, 5 years, after 6 years of primary school).

mutawassiṭah mihaniyah (UAR: Region of Syria, lower vocational secondary school, 4 years, after 5 years of primary school; may lead to 3 more years at the upper secondary level in a *iʿdādiyah sināʿiyah* or *madrasah tijāriyah*, see below).

sanat enstitüsü (Turkey, upper vocational secondary school, 2 more years in continuation of *orta sanat okulu*, see above).

secondary technical school (United Kingdom: England and Wales, secondary school providing general education with a technical bias linked with some branch of industry or commerce, 5-7 years, after 7 years of primary school).

silup hakkyo (Korea, vocational secondary school for agriculture, commerce, fisheries or engineering, 3 years, after 6 years of primary school and 3 years of lower secondary school).

sināʿiyah (Saudi Arabia, vocational training school, 5 years, after 6 years of primary school).

szakérettségi tanfolyamok (Hungary, full-time vocational secondary school for adults, 2 years, after 8 years of primary school).

technical college (Union of South Africa, multilateral vocational secondary school, 5 years, after 7 years of primary school; courses sometimes beyond the secondary level).

technicum zawodowe (Poland, vocational secondary school, 4-5 years, after 7 years of primary school).

tehničeskie učilišča (USSR, vocational technical schools, 1-2 years, after completion of the 10-year school).

tehnikum (USSR, vocational training school for technicians, 2 or 4 years, admitting pupils who have completed the 10-year or the 7-year school).

tekhnicumi (Bulgaria, vocational secondary schools, 2-5 years, after completion of 11-year school or 7-year school).

valmistavat ammattikoulut (Finland, lower vocational training school, 2 years, after 8 years of primary school; leads to *erikoisammattikoulut*, see above).

vocational and commercial high schools (Canada, secondary schools, after 8 years of primary schools, with 4 or 5-year courses emphasizing vocational subjects).

vocational and technical high schools (Liberia, vocational secondary schools, 4 years, after 8 years of primary school).

vocational high school (Philippines, vocational secondary school with multilateral course, 4 years, after 6 years of primary and intermediate school).

vocational high school (Union of South Africa, vocational secondary school, 5 years, after 7 years of primary school, with separate institutions for technical training, home economics and commercial courses).

vocational secondary school (Malaya, 3-5 years, after 6 years of primary school, with English as medium of instruction).

yrkesutbildninganstalter (Sweden, vocational training schools, 1-2 years, after 8 years of primary school for pupils who have already had practical experience of domestic work, agriculture and forestry).

zasadnicza szkola zawodova (Poland, vocational training school, 2 or 3 years, after 7 years of primary school, with courses to be completed in a *technicum zawodowe*, see above).

(b) Schools providing vocational education in agriculture, forestry and fishing

agricultural college (Union of South Africa).
agricultural school (Afghanistan, Australia, etc.).
algemene landbouw- of tuinbouwschool (Netherlands).
beit sefer haqla'i (Israel).
búnadarskóli (Iceland).
colegio de agricultura (Ecuador).
dābîrestān-e kēshâvārzi (Iran).
école d'agriculture (Switzerland).
école de laiterie (Canada).
école forestière (Canada).
école moyenne agricole (France, Tunisia, etc.).
escola agrícola (Brazil).
escola de regentes agricolas (Portugal).
escola prática de agricultura (Portugal).
escuela agrícola (Chile, Paraguay, etc.).
escuela de peritos agrícolas (Spain).
fiskerfagskole (Norway).
geoponiki scholi (Greece)
iʿdādiyah zirāʿiyah (UAR: Region of Egypt and Region of Syria).
instituto agrícola (Guatemala).

instituto agropecuario (Peru).
istituto tecnico agrario (Italy).
landbruksskole (Norway).
land- und forstwirtschaftliche Lehranstalten (Austria).
Landwirtschaftliche Fortbildungsschule (Switzerland).
lesnická škola (Czechoslovakia).
madrasat al-zirāiyah (Iraq, Jordan).
mezögazdasági technikum (Hungary).
school of agriculture (Thailand).
scuola tecnica agraria (Italy).
secondary agricultural school (Philippines).
sekolah menengah pertanian (Indonesia).
selskostopanski praktičesti mašinotraktorni učilišta (Bulgaria).
srednja poljoprivredna škola (Yugoslavia).
srednja šumarska škola (Yugoslavia).
zeevisserijschool en binnenvaartschool (Netherlands).
zemědělská škola (Czechoslovakia).

(c) Schools providing vocational education in commerce

business and commercial colleges (Union of South Africa).
colegio de comercio (Ecuador, Paraguay, etc.).
commercial high school (Australia, Canada).
commercial school (Afghanistan, Ethiopia, etc.).
école commerciale (Haiti, Luxembourg, etc.).
escola comercial (Brazil, Portugal).
escuela de comercio (Argentina, Cuba, etc.).
escuela de contabilidad (El Salvador).
escuela de secretariado (Honduras).
escuela técnica comercial (Costa Rica).
escula de teneduría de libros (El Salvador).
Handelsakademie (Austria).
handelsgymnasium (Norway, Sweden).
handelsonderwijs (Netherlands).
Handelsschule (Austria, Switzerland).
handelsskole (Denmark, Norway).
iʿdādī tijāri (UAR: Region of Egypt).
instituto comercial (Peru, Portugal).
instituto de comercio (Chile, Colombia, etc.).
istituto tecnico commerciale e per geometri (Italy).
kaufmännische Fortbildungsschule (Switzerland).
közgazdasági technikum (Hungary).
madrasat al-tijārah al-iʿdādiyah (Iraq).
marākez tijāriyah (Jordan).
orta ticaret okulu (Turkey).
samvinnuskóli (Iceland).
scuola tecnica commerciale (Italy).
sekolah menengah ekonomi (Indonesia).
srednja ekonomska škola (Yugoslavia).
thanawiyah tijāriyah (UAR: Region of Egypt).

ticaret lisesi (Turkey).
verzlunarskóli (Iceland).

(d) Schools providing vocational education in industry and trades

centre d'enseignement professionnel (Luxembourg).
colegio técnico industrial (Ecuador).
collège technique (France).
école des mines (Luxembourg).
école de papeterie (Canada).
école nationale professionnelle (France).
escola industrial (Brazil, Portugal).
escuela de maestría (Spain).
escuela de peritos industriales (Spain).
escuela industrial (Argentina, Mexico, etc.).
escuela técnica industrial (Cuba, Venezuela, etc.).
gewerbliche Fortbildungsschule (Switzerland).
honārestān (Iran).
iʿdādi ṣīnāʿi (UAR: Region of Egypt).
industriske škole (Yugoslavia).
instituto industrial (Colombia, Guatemala, etc.).
istituto tecnico industriale (Italy).
ipari technikum (Hungary).
kisul hakkyo (Korea).
kodeung kisul hakkyo (Korea).
madrasat al-ṣanā'e'wal-funūn (Jordan).
pre-engineering school (Liberia).
remeslennye i železnodorožnye učilišča (USSR).
Şcoli tehnice de maistri (Rumania).
Şcoli tehnice pentru muncitori calificaţi (Rumania).
Şcoli tehnice pentru personal tehnic (Rumania).
scuola tecnica industriale (Italy).
secondary technical school (Ghana).
secondary trade school (Philippines).
sekola teknik (Indonesia).
škola průmyslová (Czechoslovakia).
srednja gradjevinska škola (Yugoslavia).
srednja rudarska škola (Yugoslavia).
srednja saobračajna škola (Yugoslavia).
srednja tekničska škola (Yugoslavia).
technical college (Union of South Africa).
technical school (Afghanistan, India, etc.).
technical secondary or high school (Australia).
Technikum (Switzerland).
technisch onderwijs (Netherlands).
teknisk fagskole (Norway).
teknisk skole (Norway).
tekniskt gymnasium (Sweden).
Textilfachschule (Switzerland).
thānawiyah ṣināʿiyah (UAR: Region of Egypt).
trade school (Ghana, etc.).

(e) Schools providing vocational education in arts and crafts, including apprenticeship training

akademi seri rupa Indonesia (Indonesia).
apprentice training (Albania, Ireland, etc.).
arts and crafts school (Pakistan).
atelier d'apprentissage (Belgian Congo).
Berufsschule für Lehrlinge (Austria).
building trades school (Ethiopia).
centres d'apprentissage (France).
clerks' school (Afghanistan).
cours professionnels d'apprentissage (Switzerland).
école d'artisans (Luxembourg).
école d'arts et métiers (Canada).
escola artesenal (Brazil).
escuela artesanal (Venezuela).
escuela de aprendizaje (Spain).
escuela de artes gráficas (El Salvador).
escuela de artes y oficios (Colombia, Dominican Republic, etc.).
handverks- og kunstindustriskole (Norway).
iʿdādi ʿamalī (UAR: Region of Egypt).
idnskóli (Iceland).
kunst-, kunstnijverheid- en bouwkunstonderricht (Netherlands).
Kunstgewerbeschule (Switzerland).
lærlingeskole (Norway).
Metallarbeiterschule (Switzerland).
niže stručne škole (Yugoslavia).
promišleni učiliõta za trudovi rezervi (Bulgaria).
school for mechanics (Afghanistan).
scoli profesionale de ucenici (Rumania).
scuola d'arti e mestieri (Switzerland).
škola fabrično-zavodskogo obučenija (USSR).
školá stātních pracovních záloh (Czechoslovakia).
školá uměleckého průmyslu (Czechoslovakia).

(f) Schools providing vocational education in household arts, home economics, and women's occupations in general

colegio de educaciōn para el hogar (Ecuador).
corsi di economia domestica (Switzerland).
cours ménager (Luxembourg).
dābîrestān-e fannī-ye dokhtărān (Iran).
domestic arts school (Liberia).
école ménagère (Belgian Congo, Haiti, etc.).
école des métiers féminins (Canada).
école moyenne familiale (Canada).
école professionnelle de filles (Haiti).
escuela de artes domésticas (Costa Rica).
escuela de artes y oficios para mujeres (Venezuela).
escuela de economía doméstica (Paraguay).

escuela del hogar (Cuba).
escuela profesional para mujeres (Argentina).
escuela técnica femenina (Chile).
fackskola för huslig ekonomi (Sweden).
Frauenfachschule (Switzerland).
Haushaltungsschule (Austria).
hauswirtschaftliche Fortbildungsschule (Switzerland).
home economics school (Thailand).
home science high school (Australia).
honārestān-e bânovân (Iran).
huishoudschool (Netherlands).
húsmaedraskóli (Iceland).
husmorskole (Norway).
iʿdādī nisawī (UAR: Region of Egypt).
institut familial (Canada).
kvinnelige industriskole (Norway).
Lehranstalt für gewerbliche Frauenberufe (Austria).
Lehranstalt für hauswirtschaftliche Frauenberufe (Austria).
Lehranstalt für soziale Frauenberufe (Austria).
madrasat al-funūn al-manziliyah (Iraq).
school of domestic sciences (Ireland).
scuola professionale femminile (Italy).
sekolah kepandaian putri (Indonesia).
trade school for women (Thailand).

(g) Schools providing vocational education of various kinds at pre-university level

civil aviation school (Ethiopia).
colegio militar (Peru, etc.).
dental nurses' school (New Zealand).
école d'accouchement (Luxembourg).
école d'aides-accoucheuses (Belgian Congo).
école d'arpentage (Haiti).
école de gardes-malades (Haiti).
école hôtelière (Haiti).
école d'infirmières (Canada).
école de marine (Canada).
école de météorologistes (Belgian Congo).
école de télégraphistes (Belgian Congo).
escola de enfermagem (Portugal).
escola náutica (Portugal).
escuela de administración (Venezuela).
escuela de agrimensura (Cuba).
escuela de enfermeras y parteras (Mexico).
escuela militar (Mexico).
escuela naval (Mexico).
escuela de periodismo (Cuba).
escuela de servicio social (Venezuela).
escuela técnica aeronáutica (Cuba).
instituto de serviço social (Portugal).
istituto tecnico nautico (Italy).

kommunal- og socialskole (Norway).
madrasat al-mumarriḍāt (Iraq, UAR: Region of Syria).
madrasat al-muwaẓafīn al-siḥḥiyīn (Iraq).
maʿhad al baṣariyāt (UAR: Region of Egypt).
maʿhad al-zāe irát al-ṣiḥḥiyāt (UAR: Region of Egypt).
medicine school (Albania).
military college (Union of South Africa, etc.).
nurses' college (Union of South Africa).
nurses' training school (Ethiopia, etc.).
nursing school (Afghanistan, etc.).
scuola di amministrazione (Switzerland).
seminarios (Ecuador, etc.).
sjuksköterskeskola (Sweden).
socialinstitut (Sweden).
soziale Frauenschule (Switzerland).
srednja bibliotekarška škola (Yugoslavia).
srednja hidrometeorološka škola (Yugoslavia).
srednja medicinska škola (Yugoslavia).
srednja škola za medicinske tehničare (Yugoslavia).
stýrimannaskóli (Iceland).
szkola felczerska (Poland).
szkola pielęgniarska (Poland).
telecommunications school (Ethiopia).
theological school (Afghanistan, etc.).
zdravotnickā škola (Czechoslovakia).
zee- en luchtvaartschool (Netherlands).

(h) Schools providing vocational education in the fine arts, music, and related fields

académie de musique (Belgium).
art and music high schools (Australia).
conservatoire de musique (Belgium, etc.).
conservatorio de música (Ecuador, El Salvador, etc.).
conservatorio di musica (Italy).
école de beaux-arts (France, Tunisia, etc.).
école de musique (Belgium, France, etc.).
escuela de artes plásticas y música (Dominican Republic).
escuela de bellas artes (Mexico, Spain, etc.). .
escuela de bellas artes y plásticas (Cuba).
escuela de música (Honduras).
escuela de música y de bellas artes (Venezuela).
escuela de música y declamación (Guatemala).
hudební škola (Czechoslovakia).
istituto d'arte (Italy).
konsthögskola (Sweden).
kunstakademi (Norway).
liceo musicale (Italy).
maʿhad al-funūn al-jamīlah (Iraq).
odeion (Greece).
ṣcoala medie de artā (Rumania)

scuola d'arte (Italy).
sredni učilišta po izkustvata (Bulgaria).
srednja baletska škola (Yugoslavia).
srednja muzička škola (Yugoslavia).
srednja umetnička škola (Yugoslavia).

SCHOOLS OF THE SECOND LEVEL FOR THE TRAINING OF TEACHERS

Up to the present we have not considered those schools whose special function is to train teachers. In general, teacher training schools at this level are mainly intended for the preparation of teachers in pre-primary and primary schools. Certain types of school, however, have the specific purpose of training teachers for vocational schools. The training of teachers for general secondary schools is usually carried on in universities and other institutions of higher education, which will be discussed in the next section.

Most of the teacher training schools require, as a minimum condition of admission, the completion of primary education, and sometimes a specified amount of secondary education as well. The period of training may vary from 1 year to 4 years or more, usually leading to a certificate or diploma which qualifies the person for a teaching position. There is often a shorter course for the training of rural school teachers. In some cases, though not always, the possession of such a certificate or diploma also entitles the holder to be admitted to an institution of higher education. The following list illustrates the various types of teacher training school of the secondary level reported by the different countries.

(a) Teacher training schools based on less than 6 years of general education

curso normal regional (Brazil, teacher training school for rural primary teachers, 4 years, after 5 years of primary education).
escuela normal elemental (Colombia, teacher training school for teachers in urban primary schools, 4 years, after 5 years of primary education).
escuela normal rural (Colombia, as above, but for rural teachers).
escuela normal agrícola (Colombia, teacher training school for teachers in agricultural schools, 5 years, after 5 years of primary education).
escuela normal superior (Colombia, teacher training school for teachers in secondary schools, 6 years, after 5 years of primary education).
öğretmen okulu: koylerde (Turkey, rural teacher training school, 6 years, after 5 years of primary education).
tadrīb mudarrisī al-madāris al-awwaliyah (Sudan, teacher training school for teachers in primary schools, 4-6 years, after 4 years of primary education).

(b) Teacher training schools based on 6 years of general education

colegio de ciencias de la educaciōn (Ecuador, teacher training school, 6 years)
école de moniteurs (Belgian Congo, teacher training school, 4 or 5 years).

escuela nacional de educación física (Nicaragua, teacher training school for physical education teachers, 2 years).

escuela normal (Chile, 6 years; Honduras, Nicaragua, 5 years; Venezuela, 4 years).

escuela normal rural (Ecuador, El Salvador, 4 years; Honduras, 3 years).

iʿdād al-muʿ allimīn (Saudi Arabia, teacher training school, 5 years).

maʿāhed al-muʿ allimīn al-ibtidā' iyah (Saudi Arabia, emergency teacher training centre for primary teachers, 3 years).

middle teachers' school (Afghanistan, teacher training school for teachers in lower secondary schools, 6 years).

primary teachers' school (Afghanistan, as above, but for primary teachers, 6 years).

sekolah guru B (Indonesia, teacher training school at lower secondary level, 3 years).

(c) Teacher-training schools based on 7 years of general education

escuela normal de maestros (Paraguay, teacher training school for primary teachers, 4 years).

escuela normal de profesores (Paraguay, teacher training school for secondary teachers, 7 years).

liceum pedagogiczne (Poland, teacher training school, 4 years).

pedagogičesko učilište (Bulgaria, 5 years).

şcoala pedagogică de educatoare (Rumania, teacher training schools for women teachers in pre-primary schools, 6 years).

şcoala pedagogica de invatatori (Rumania, teacher training school for primary teachers, 6 years).

teacher training school (Albania, 4 years).

(d) Teacher training schools based on 8 years of general education

almindeligt seminarium (Denmark, teacher training college, 4 years).

Bildungsanstalt für Arbeitslehrerinnen (Austria, specialized teacher training school for women teachers of needlework and sewing, 2 years).

Bildungsanstalt für Kindergärtnerinnen und Horterzieherinnen (Austria, specialized teacher training school for pre-primary teachers, 2 years).

community school teacher training school (Ethiopia, 1 year).

elementary teacher training school (Ethiopia, 4 years).

handicraft teacher training school (Ethiopia, 1 year).

istituto magistrale (Italy, teacher training school, 4 years).

loererskole (Norway, teacher training college, 4 years).

Lehrerbildungsanstalt (Austria, teacher training school, 5 years).

öğretmen okulu: şehirlerde (Turkey, urban teachers' training school, 3 years).

pedagogická škola (Czechoslovakia, teacher training school, 4 years).

scuola di magistero professionale: femminile (Italy, specialized teacher training school for teachers in girls' vocational schools, 5 years).

škola pro učitelky mateřských škol (Czechoslovakia, teacher training school for teachers in pre-primary schools, 3 years, followed by a year of supervised teaching).

skola za vaspitače (Yugoslavia, pre-primary teacher training school, 4 years).

småbørnslærerindeseminarium (Denmark, teacher training college for teachers in lower rural primary school, 2½ years).

učiteljska domaćička škola (Yugoslavia, specialized training school for teachers of home economics, 4 years).

učiteljska škola (Yugoslavia, primary teachers' training school, 5 years).

(e) Teacher training schools based on 9 years of general education

chien-yi shih-fan ko (China, emergency teacher training course, 1 year).

dâneshsārâ-ye kēshâvārzi (Iran, specialized teacher training school for teachers of agriculture, 2 years).

dâneshsārâ-ye môghaddâmati (Iran, teacher training school, 2 years).

dār al-muʿ allimīn (UAR: Region of Syria, teacher training school, 3-4 years).

dār al-muʿ allimīn al-ibtidā'iyah (Iraq, teacher training school, 3 years).

dār al-mu' allimīn al-rīfiyah (Jordan, UAR: Region of Syria, rural teacher training school, 2 years).

école normale gardienne (Belgium, teacher training school for pre-primary teachers, 3 years).

école normale primaire (Belgium, Luxembourg, teacher training school, 4 years; Lebanon, 2 years).

escola do magistério primário (Portugal, teacher training school for primary school teachers, 2 years).

escola normal (Brazil, teacher training school, 3 years).

escuela del magisterio (Spain, primary teacher training schools, 3 years).

escuela normal (Cuba, teacher training school, 4 years; Mexico, 3 years).

escuela normal urbana (El Salvador, urban teachers' training schools, 3 years).

folkskoleseminarium (Sweden, teacher training college, 4 years).

instituto de educação (Brazil, teacher training college, 3-5 years).

instituto nacional de educación física (Cuba, specialized secondary and teacher-training school of physical education, 3 years).

instituto normal (Guatemala, teacher training school, 2 years).

kennaraskóli (Iceland, teacher training school, 4 years).

kweekschool (Netherlands, teacher training school for primary teachers, 5 years).

sapum hakkyo (Korea, teacher training school, 3 years).

shih-fan hsüeh-hsiao (China, teacher training school, 3 years).

yo-chih shih-fan hsüeh-hsiao (China, teacher training course for kindergarten teachers, 2 years).

(f) Teacher training schools based on 10 or more years of general education

al-dawrāt al-tarbawiyah (Iraq, teacher training course, 1 year, after 11 years of primary and secondary education).

école normale (Cambodia, teacher training course, 1 year, after 10 years of primary and secondary education).

école normale (France, teacher training school, 4 years, after 10 years of primary and secondary education).

école normale moyenne (Belgium, teacher training college, especially for teachers in the *école moyenne*, 2 years, after 12 years of primary and secondary education).

école normale technique (Belgium, as above but for vocational school teachers).

escuela normal (Argentina, teacher training school, 2 years, after 10 years of primary and secondary education).

escuela normal rural (Costa Rica, rural teachers' training school, 1 year, after 11 years of primary and secondary education).

escuela normal urbana (Costa Rica, urban teachers' training school, 2 years).

instituto normal (Uruguay, teacher training school, 3 years, after 10 years of primary and secondary education).

normal school (Pakistan, 3 years, after 10 years of primary and secondary education).

teacher training college (Ceylon, 2 years, New Zealand, 2-3 years, after 11 years of primary and secondary education).

teacher training college: primary (Thailand, 2 years, after 10 years of primary and secondary education).

teacher training college: secondary (Thailand, 4 years).

teacher training college: vocational (Thailand, 3-5 years).

teacher training college: women's trade schools (Thailand, 2 years).

teh-bieh shih-fan ko (China, training course for teachers of specialized subjects, 1 year, after 12 years of primary and secondary education).

EDUCATION AT THE THIRD LEVEL

Education at this level is provided by universities and other institutions which normally require entering students to have completed the second level of education. Since the total duration of education at the first and second levels may vary from 10 years to 14 years or more, it follows that the level of higher education is not strictly comparable from one country to another. The duration of higher education is less easily determined than that of primary or secondary education. Though in some countries (as in the USA), students in higher education may be classified by year of study, and the duration of study—at least for the undergraduate students—expressed in number of years, the same cannot be said of most of the countries of Europe. The completion of higher education is therefore not directly related to the number of years the student has attended a university or other institution, but is evidenced by the possession of a degree, diploma or certificate, usually based upon an examination, with or without a thesis or dissertation.

Institutions providing education at this level may be distinguished as degree-granting and non-degree-granting institutions. All universities, and some other institutions with equivalent status, belong to the category of degree-granting institutions. All other institutions of higher education, not having equivalent status with the universities, belong to the category of non-degree-granting institutions. For convenience, these two categories may also be referred to as university institutions and non-university institutions.

The following partial lists will illustrate the different types of degree-granting and non-degree-granting institutions existing in a number of countries which provide education at the third level.

(a) Degree-granting institutions of higher education

Australia—university *faculties* of arts, science, engineering, law, medicine, dentistry, veterinary science, music, architecture, agriculture, commerce or economics, education; *departments* of divinity, journalism, pharmacy, social studies.

Belgium—*facultés de l'Université; Ecole vétérinaire, Faculté polytechnique, Institut agronomique, Institut supérieur de pédagogie, Institut universitaire des territoires d'outre-mer, Institut supérieur de commerce*, etc.

Brazil—university *faculties*; *schools* of engineering, chemistry, agronomy, veterinary science, music, architecture, etc.

Bulgaria—*universities, colleges* of economics, medical colleges.

Canada—*faculties, colleges* and *schools* of arts, science, engineering, agriculture, forestry, dentistry, medicine, veterinary science, law, commerce, theology, teacher-training, etc.

Ceylon—university, with *faculties* of arts, oriental studies, science, agriculture, veterinary science, law, medicine.

Denmark—*universitetet* (university), *Polyteknisk Læreanstalt* (technical university), *Tandlægehøjskolen* (college of dentistry), *Farmaceutisk Læreanstalt* (college of pharmacy), *Landbohøjskole* (agricultural college), *Veterinaer-højskole* (veterinary college), *Handelshøjskole* (business college), *Akademi for de Skønne Kunster* (academy of fine arts).

Ecuador—*universidades*, with faculties of: *derecho* (law) *medicina* (medicine), *odontologīa* (dentistry), *ingenierīa* (engineering), *arquitectura* (architecture), *ingenierīa quīmica* (chemical engineering), *farmacia y bioquīmica* (pharmacy and biochemistry), *economía* (economics), *agronomía* (agronomy), *medicina veterinaria* (veterinary medicine), *ciencias de la educación* (education), *periodismo* (journalism), *idiomas* (linguistics), *psicología* (psychology), *obstetricia* (obstetrics), *enfermería* (nursing).

Finland—*Jumaluusopillinen tiedekunta* (faculty of theology), *Lainopillinen tiedekunta* (law), *Lääketieteellinen tiedekunta* (medicine), *Farmaseuttinen laitos* (institute of pharmacy), *Historiallis-kielitieteellinen tiedekunta* (faculty of history and philology), *Valtiotieteellinen tiedekunta* (political science), *Matemaattis-luonnontieteellinen tiedekunta* (mathematics and natural science), *Maatalous-metsätieteellinen tiedekunta* (agriculture and forestry), *Voimistelutaitos* (institute of gymnastics), *Teknillinen korkeakoulu* (institute of technology), *Eläin lääketieteellinen korkeakoulu* (veterinary science), *Opettajakorkeakoulu* (education), *Kauppakorkeakoulu* (commerce), *Yhteiskunnallinen korkeakoulu* (social sciences), *Sibeliusakatemia* (Sibelius Academy of Music).

France—*facultés de droit, sciences, lettres, facultés et écoles de médecine, facultés et écoles de pharmacie, facultés de théologie, école normale supérieure.*

India—*universities* and *colleges*, including faculties of arts and science, law, medicine, nursing and home science, dentistry, pharmacy, veterinary science, engineering, technology, agriculture, mining, education, fine arts, commerce, Oriental languages, etc.

Italy—*università e istituti superiori: facoltà di scienze matematica, fisiche e naturale* (mathematics, physical and natural science), *chimica industriale* (industrial chemistry), *farmacia* (pharmacy), *medicina e chirurgia* (medicine and surgery), *ingeneria* (engineering), *architettura* (architecture), *agraria* (agriculture), *medicina veterinaria* (veterinary medicine), *giurisprudenza* (law), *scienze politiche* (political science), *economia e commercio* (economics and commerce), *scienze statistiche, demographica e attuariali* (statistical, demographic and actuarial science), *istituto navale* (naval institute), *lettere e filosofia* (arts and philosophy), *magistero* (pedagogy), *istituto orientale* (oriental institute).

Mexico—*facultades* de *filosofía y letras* (philosophy and literature), *ciencias* (science), *derecho* (law); *escuelas nacionales* de *ciencias políticas y sociales* (political and social sciences), *economía* (economics), *comercio* (commerce), *medicina* (medicine), *odontología* (dentistry), *medicina veterinaria* (veterinary medicine), *ingeniería* (engineering), *ciencias químicas* (chemistry), *arquitectura* (architecture).

Netherlands—*universities*, including the faculties of: theology, law, sociology, medicine, dental surgery, science, psychology and social geography, physical geography, literature, economics, political and social science, veterinary science, engineering, agriculture.

Sweden—*teologiska fakulteter* (faculties of theology), *juridiska fakulteter* (law), *filosofiska fakulteter—humanistiska och naturvetenskapliga* (philosophy—arts and science), *medicinska fakulteter* (medicine); *tandläkarhögskolor* (schools of dentistry), *farmaceutiska institutet* (college of pharmacy), *veterinarhögskolan* (veterinary science), *tekniska högskolor* (technology), *lantbrukshögskolan* (agriculture), *skogshögskolan* (forestry), *handelshögskolor* (commerce).

Turkey—*universities*, with *faculties* of: languages, history, geography, sciences, medicine, law, veterinary medicine, agriculture, political science, letters, forestry, economic sciences, electricity, architecture, building, mechanics, theology.

United Kingdom—*universities* and *university colleges*, including *faculties* and *schools* of: arts, pure science, medicine, dentistry, technology, agriculture and forestry, veterinary science.

United States of America—*universities*, liberal arts *colleges*, teachers' colleges, technological *schools*, theological schools, other professional schools.

(b) Non-degree-granting institutions of higher education

Australia—conservatoriums of music, library schools, teachers' colleges, professional and vocational training schools, naval college, military and air force colleges, senior technical colleges, agricultural colleges, business colleges.

Belgium—*écoles techniques supérieures; école supérieure du secrétariat, école de service social*, etc.

Brazil—*escola de serviço social* (school of social service), *escola de enfermagem* (nursing), *escola de biblioteconomia* (librarianship), *escola de museologia* (museology), etc.

Bulgaria—technical colleges, agricultural colleges, colleges of fine arts, music and drama, higher institute of physical education, theological academy, communist party college.

Canada—junior colleges, technical institutes, schools of fine arts, etc.

Ceylon—law college, technical college.

Denmark—*lærerhøjskolen* (teachers' college), *gymnastikhøjskolen* (physical training), *musikkonservatoriet* (conservatory of music), *officersskolen* (military college for officers), etc.

Ecuador—polytechnic school, higher technical school, school for social service.

Finland—*4-v. seminaari* (teacher-training college with four-year course), *5-v. seminaari* (same, with five-year course), *ylemmat ammattikoulut* (advanced vocational and professional schools).

France—*grandes écoles scientifiques et techniques, écoles d'ingénieurs* (colleges of science, technology and engineering), *grandes écoles agricoles ou vétérinaires* (agricultural and veterinary colleges), *grandes écoles artistiques* (colleges of fine arts and music).

India—intermediate colleges, polytechnic or vocational schools; colleges or institutes of music, dancing, painting; colleges for domestic science, colleges for physical education.

Italy—*Academia di belle arti* (academy of fine arts), *scuola di ostetricia* (school of obstetrics).

Mexico—*escuela normal superior* (institute of education), *escuela normal de especialización* (specialized teacher-training college), *escuela nacional de música* (music academy), etc.

Netherlands—*groot-seminarium* (senior seminary), school for social work, teacher-training school for secondary education, notary school, tax administration academy, academy of arts, military academy, actuarial school, training school for foreign trade and diplomacy.

Sweden—*Fackskola för huslig ekonomi* (vocational training school for home economics), *gymnastiska centralinstitutet* (teacher training school for teachers of physical education), *socialinstitut* (vocational training school for social welfare workers), *högre skolor för jordbruk, skogsbruk, fiske, navigation* (higher schools for agriculture, forestry, fishing, navigation).

Turkey—*Devlet konservatuvari* (State conservatory), *yüksek ekonomi ve ticaret okulu* (higher school of economics and commerce), *yüksek öğretmen okulu* (higher teacher training school), *disci okulu* (school of dentistry), *eczaci okulu* (pharmacy), *teknik okulu* (higher technical school), *yuksek muhendis mektebi* (school of engineering), *tarim alet ve makineleri uzmanlik okulu* (specialized school for agricultural mechanics), etc.

United Kingdom—technical college, training college, school of art, school of music, etc.

United States of America—junior college, community college, technical institute, normal school, etc.

EDUCATION NOT CLASSIFIED BY LEVEL

There are certain types of educational institutions which are not usually classified by level, since by their nature they either cover more than one level or are not directly related to any particular level of education. Examples will be given here of provisions for: (a) special education, (b) adult education, (c) education by correspondence, radio and television.

Special education

This is the type of education given to those pupils 'who deviate so far physically, mentally, emotionally or socially from the relatively homogeneous groups of so-called "normal" pupils that the standard curriculum is not suitable for their educational needs.'[1] Provisions for special education are made in special schools, special classes attached to regular schools, or special institutions which may be called by other names than schools. The education thus provided is usually at the primary level, but may also include studies at the secondary level. The curriculum is likely to be biased towards vocational training. The following examples will show the nature and scope of special education in a few selected countries.

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[1] Carter V. Good, ed., *Dictionary of Education* (2nd edition), New York, McGraw-Hil Book Co. Inc., 1959.

Argentina—'There are special establishments for physically or mentally handicapped pupils; home education services for children suffering from diseases which keep them away from school for long periods; hospital schools for sick children in national or municipal hospitals; special schools for children with slight abnormalities easily curable by appropriate schooling; and schools for feeble-minded children where teaching is given by masters who have taken a special course at the directorate-general of school health.'[1]

Australia—'All States provide education for physically handicapped or maladjusted children, and schools or education facilities exist for abnormal and delinquent children.'[2]

Austria—'The *Sonderschulen*, organized on an eight-grade plan, receive physically or mentally handicapped children; there are various types of such schools, the most important being for mentally deficient, physically disabled, blind, or deaf and dumb children.'[3]

Bulgaria—'Physically or mentally handicapped children (deaf and dumb, blind, backward, maladjusted, etc.) attend special schools with boarding facilities. Here the pupils are given vocational and general education concurrently.'[4]

Canada—a survey of special education for exceptional children in 1953-54 covered facilities for the education of children in the following categories. (1) Mentally exceptional and emotionally disturbed children: (1a) mentally retarded, (1b) mentally gifted, (1c) emotionally disturbed. (2) Physically handicapped children: (2a) blind and partially sighted, (2b) deaf and hard of hearing, (2c) speech-defective, (2d) cerebral-palsied, (2e) orthopaedic, (2f) hospitalized, (2g) tuberculous, in sanatoria, (2h) home bound, (2i) delicate, in open-air schools. (3) Delinquent. (4) Orphaned and neglected.[5]

Finland—statistics are regularly published concerning schools for deaf-mutes and schools for the blind.[6]

Germany—statistics are regularly published covering the following categories of special education: *Hilfsschulen* (schools for backward children), *Schulen in Heil- und Pflegeanstalten* (schools in hospitals, etc.), *Schulen in Fürsorge- und sonstigen Erziehungsanstalten* (schools in welfare and other educational establishments), *Blindenschulen* (schools for the blind), *Taubstummenschulen* (schools for deaf-mutes), *sonstige Sonderschulen* (other special schools, for the partially sighted, speech-defectives, hard-of-hearing, orthopaedic cases).[7]

Italy—statistics are regularly published covering special schools for the following categories of children: *anormali psichici* (mentally abnormal), *anormali sensoriali* (blind and deaf-mutes), and *minorati fisici* (physically deficient).[8]

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1. *World Survey of Education*, Vol. II, p. 83.
2. Ibid., Vol. II, p. 94.
3. Ibid., Vol. II, p. 117.
4. Ibid., Vol. II, p. 179.
5. Canada, Dominion Bureau of Statistics, *Statistics of Special Education for Exceptional Children, 1953-54*, Ottawa, 1959.
6. *Statistical Yearbook of Finland*, 1958.
7. Statistisches Bundesamt, 'Die allgemeinbildenden Schulen in den Ländern des Bundesgebietes und in West-Berlin im Mai 1953', in *Statistische Berichte*, 21 October 1954.
8. *Annuario Statistico dell'Istruzione Italiana*, 1957.

Netherlands—statistics are regularly published covering special education *(buitengewoon onderwijs)* in the following categories: (1) mentally deficient, (2) deaf-mutes, (3) partially deaf, (4) blind and partially blind, (5) physically defective, (6) children suffering from tuberculosis, (7) sickly children, (8) epileptic children, (9) 'problem children', (10) children under public guardianship, (11) schools annexed to pedagogical institutes, (12) schools for children having other difficulties, (13) children of migrant workers living in boats, and (14) of those living in caravans.[1]

Union of Soviet Socialist Republics—'There are elementary, 7-year and secondary schools for blind children, in which, though the curriculum does not differ from ordinary schools, the course is one year longer. These schools also provide the children with vocational training. . . . The schools for deaf-mutes have a nine-year course. . . . They are given a general elementary education and vocational training. . . . Schools for mentally deficient children have a 7-year course and provide training in some trade besides general education. . . . There are open-air sanatorium schools for children suffering from tuberculosis.'[2]

United Kingdom: England and Wales—'Special educational treatment is provided in special schools, ordinary schools, by tuition at home or otherwise, for pupils who require it because of a physical or mental handicap. . . . Ten separate categories of handicap are distinguished for special educational treatment: blind, partially sighted, deaf, partially deaf, delicate, epileptic, physically handicapped, speech defects, maladjusted and educationally sub-normal.'[3]

United States of America—'Elementary schools for special programmes include: (a) local day schools and (b) residential schools. Both types encompass: schools for the physically handicapped (including schools for the crippled, cerebral palsied, cardiac, delicate, deaf, and blind); schools for the mentally retarded; schools for the gifted; and schools for the socially and emotionally maladjusted.' The latest available survey of special education for exceptional children covers enrolment in special schools and classes (in elementary and secondary schools) for the following types of children: (1) mentally retarded, (2) speech-defective, (3) crippled, (4) deaf, (5) hard-of-hearing, (6) blind, (7) partially seeing, (8) special health problems (tuberculosis, epilepsy, cardiac and other below-par conditions), (9) mentally gifted. Incomplete data collected on home-bound, hospitalized and socially maladjusted children, however, were not published.[4]

Yugoslavia—statistics are published concerning special schools and classes, at the primary and secondary levels, for children in the following categories: (1) retarded, (2) partially sighted, (3) hard-of-hearing, (4) blind, (5) deaf-mutes, (6) crippled, (7) socially maladjusted, (8) sick and convalescent.[5]

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1. Netherlands, Central Bureau of Statistics, *Statistiek van het buitengewoon lager onderwijs*, (Statistics of special elementary education), 1955-58.
2. *World Survey of Education*, Vol. II, p. 1020.
3. Ibid., Vol. II, p. 1041.
4. United States Office of Education, *Statistics of Special Education for Exceptional Children, 1952-53*, Washington, D.C., 1954.
5. Yugoslavia, Federal Institute of Statistics, *Osnovne i Srednje škole, 1956/57*, Belgrade, 1958.

Adult education

This is the type of education provided mainly for the adult population who have either not been to school before or are not currently receiving full-time education. Hence the level of instruction may vary from primary to post-secondary. The attendance may be limited to out-of-school youth and adults, or may include children who would otherwise have no opportunity for schooling. The instruction is usually organized in the form of separate courses of limited duration, though some institutions may exist for the sole purpose of providing educational facilities for out-of-school youth and adults.

Because of the widely different nature of provisions for adult education in different countries, and its customarily flexible organization, statistics on adult education are difficult to compile in an internationally comparable form. However, in view of the increasing importance given to this field of education in almost all countries, it would be desirable to have statistical data collected systematically in each country, and included in international tables showing the development of education in all its aspects in the different countries. For example, in Denmark, adult education is provided mainly through the folk high schools (*folkehøjskoler*), the evening schools (*aftenskoler*), the continuation boarding schools (*efterskoler*), the youth schools for unskilled workers (*ungdomsskoler*) and the domestic science schools (*husholdningsskoler*). Most of these schools are operated by the Workers' Educational Association, and also by similar bodies organized by political parties, but they are financed largely by the State and the municipalities. Much the same pattern is found in the other Scandinavian countries.[1]

In the United Kingdom, 'adult education is taken to mean forms of study and other activities which are undertaken voluntarily by mature people (i.e., over the age of 18) without direct regard to their vocational value'. In addition to the facilities provided by the Ministry of Education and the Local Education Authorities, adult education activities are carried on by the universities (through special departments for extra-mural studies), the independent educational associations (in particular, the Workers' Educational Association), and a variety of other independent organizations (such as the National Adult School Union, National Co-operative Educational Association, National Council of Labour Colleges, National Federation of Women's Institutes, the Young Men's

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1. Lund, Ragnar, ed., *Scandinavian Adult Education: Denmark, Finland, Norway, Sweden,* Copenhagen, Det Danske Forlag, 1949.

Christian Associations, and Young Women's Christian Associations).[1]

In Canada, two national co-ordinating bodies have been established for all types of adult education: The Canadian Association for Adult Education, founded in 1935, and the Société Canadienne d'Education des Adultes, founded in 1946. Some idea of the extent and variety of adult education activities in Canada may be gathered from two surveys conducted by these associations in their respective areas: the *Répertoire National de l'Education Populaire au Canada* (1949) and *Adult Education in Canada* (1950). The former covers the activities of nearly 400 Canadian organizations concerned directly or indirectly with adult education. The latter also presents detailed information concerning some selected types of adult education programmes, including, for instance: The School of Community Programmes (Camp Laquemac), National Farm Radio Forum, National Citizen's Forum, the Women's Institutes, and the educational services of the Canadian Legion.

Of adult education in the United States of America it has been said that it 'appears in a myriad of forms and is presented through uncounted thousands of agencies large and small, [and] it is quite outside human limitations to set forth an inclusive, detailed account of adult education activity'. However, the Institute of Adult Education, Teachers College, Columbia University, with the co-operation of the American Association for Adult Education, did compile a list of representative organizational programmes in adult education, containing some 800 entries under such headings as: adult education councils, adult schools and institutes, civic education, consumer education, correctional institutions, creative arts, family life education, forums, health education, Indian education, intercultural education, labour-management, libraries, museums, music, radio education, recreation, rehabilitation, religious education, safety education, theatres (non-profit), vocational guidance, workers' education, world affairs, young adults.[2]

Adult education in Japan is provided under the programme of 'social education', which includes the promotion of education for young workers, physical education and other activities for youth, audio-visual education, and the facilities of citizen's public halls, libraries and museums. In 1957, there were over 16,000 youth classes conducted in 3,889 municipalities (about 99 percent of all municipalities); and almost 34,000 citizens' public halls operating in 86 per cent of all municipalities. Social education by correspondence is provided by 13 organizations authorized by the Ministry of Education. In September 1957, a total number of 184,000 —mostly young men and women under 25 years of age—was reported as having received instruction through correspondence courses. Total expenditure for social education (mainly from municipal and prefectural sources) amounted in 1956 to over 8,000 million yen, about 2.2 per cent of total public expenditure on education.[1]

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[1] Unesco, *International Directory of Adult Education*, pp. 246-60.

[2] Mary L. Ely, ed., *Handbook of Adult Education in the United States*, New York, Bureau of Publications, Teachers College, New York, 1948.

'Social education' is also emphasized in India, where the programme is directed mainly towards the reduction of adult illiteracy. In 1955-56, there were 46,000 social education centres in operation, with a total enrolment of 1,143,000 men and 136,000 women. Total expenditure for social education amounted to 9.7 million rupees (mainly from Central Government funds), which represented 0.7 per cent of all public expenditure on education.[2]

In Italy, adult education is carried on under the programme of 'popular education', (*educazione popolare*), with three types of courses: for adult illiterates, for semi-literates, and for adults possessing the elementary school certificate who wish to improve their cultural level. Total attendance at these courses, during the five-year period 1947-52, was reported as follows[3]: Type A (courses for adult illiterates), 625,000; Type B (courses for semi-literates), 833,000; Type C (cultural improvement courses) 263,000.

In most of the Latin American countries, the chief emphasis of adult education is on the eradication of illiteracy, but evening schools (*escuelas nocturnas*) are commonly found to provide education at primary and secondary levels for adults who work during the day. Literacy campaigns have been launched in most of the countries in this region, as for example in Brazil, where a National Campaign of Adult Education was initiated by the Federal Government in 1947; in Chile, where a Civic Mass Literacy Corps was founded in 1944; in Cuba, where a system of night schools for the eradication of adult illiteracy was established in 1950; in Ecuador, where the National Union of Newspapermen (Unión Nacional de Periodistas) and the League for the Teaching of Illiterates (Liga de Enseñanza de Analfabetos) have taken leading roles in a continuous literacy campaign since 1944; in El Salvador, where a Department of Literacy and Adult Education was set up in 1949; in Guatemala, where

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1. Japan, Ministry of Education, *Education in 1957*, Tokyo, 1959.
2. India, Ministry of Education and Scientific Research, *Education in India, 1955-56*, Delhi, 1958.
3. L. Stefanini et al., *Educazione Popolare* (Convegno per l'Educazione e la Cultura Popolare), Rome, 1953.

a vigorous campaign was launched under a National Literacy Law passed in 1945; in Haiti, where a Directorate-General of Adult Education was created in 1947; in Mexico, where an intensive literacy campaign was launched in 1944; in Uruguay, where renewed efforts are being made under a general literacy campaign set up in 1954; and in Venezuela, where a Department of Literacy and Popular Culture (Oficina de Alfabetización y de Cultura Popular) was established in the Ministry of Education in 1944.[1]

Similarly, literacy and mass education campaigns have been launched in many countries of Asia, and parts of Europe, Africa, and in most of the non-self-governing territories. Unfortunately, statistical data on the results of such campaigns have not usually been compiled and published in a systematic and continuous manner to enable the proper evaluation of such campaigns over a number of years.

Education by correspondence, radio and television

This type of education, which exists in many countries as a complement to all the other types of organized education, is characterized by the fact that the teacher and his pupils do not find themselves in the physical presence of each other. Education by correspondence is provided in the official school systems of many countries, such as Australia, Canada, France, New Zealand, Union of Soviet Socialist Republics and United States of America. It takes care of pupils in isolated places, and those persons who, for health or other reasons, cannot attend a regular school. Correspondence courses for teachers, as part of their in-service training or preparation for certificate examinations, exist in many other countries such as Albania, Costa Rica, El Salvador, Ethiopia, Hungary, Indonesia, Japan, Luxembourg, Malaya, Morocco and Poland. Finally, many universities and private commercial schools offer correspondence courses in general or vocational subjects for all persons prepared to pay the tuition fees and to profit from the instruction.

Education by radio is carried on in most countries today, either in connexion with regular schools or as part of the adult education programme. For example, in Ceylon, 'school broadcasting programmes, which feature items for primary schools as well, are arranged by Radio Ceylon in consultation with the Department of Education'.[2] In Colombia, an extensive programme of rural education by radio (*escuelas*

STATE INSTITUTE OF EDUCATION Govt of Bengal

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[1] See: Unesco, *International Directory of Adult Education* (Paris 1952), and *Fundamental and Adult Education: a Quarterly Bulletin* (since 1949).

[2] *World Survey of Education*, Vol. II, p. 222.

radiofónicas rurales) has been in operation since 1947.[1] In New Zealand, 'for the isolated or handicapped child the postal lessons are supplemented by four or five half-hour broadcast sessions each week sent over all the main New Zealand radio stations'.[2] Similar examples can be found in many other countries.[3]

More recently, *education by television* is developing in several countries. For example, in the United States of America, apart from the educational programmes carried by the commercial television broadcasting stations, complete television programmes are broadcast by a number of colleges and universities, as well as public school systems, over channels which are exclusively reserved for non-commercial educational broadcasting.[4] In France, an extensive network of 'tele-clubs' has been organized in rural communities to exploit the possibilities of television for popular education.[5]

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[1] S. Ferrer Martin, *Escuelas Radiofónicas Rurales* (Accion Cultural Popular-Escuelas Radiofónicas de Susatenza), Bogota, 1959.

[2] *World Survey of Education*, Vol. II, p. 770.

[3] For two earlier Unesco reports on education by radio, see: *Broadcasting to Schools* (reports on the organization of school broadcasting services in various countries, Paris, Unesco, 1949); *Radio in Fundamental Education in Underdeveloped Areas*, by J. Grenfell Williams, (Paris, Unesco, 1950).

[4] *Television and Education in the United States*, by Charles A. Siepmann (Paris, Unesco, 1952).

[5] *Télévision et Éducation Populaire: les Télé-clubs en France*, by J. Dumazedier (Paris, Unesco, 1955).

VII. *Statistics of educational institutions: tabulations*

General coverage of tables

The chief function of statistical tables is to present quantitative data in a condensed form, so that the reader can readily obtain a clear and accurate picture of the situation covered by the table. The amount of detail to be shown in each table must vary according to its specific purpose. Thus, in a table designed to show the educational situation in different parts of a country, it may be necessary to give separate figures for each part of the country as to the number of schools, teachers and pupils at each level of education and for each type of school. For international reporting, it is usually enough to give national totals only, with separate figures for public and private schools. Where private schools are important, and some of them are aided by government grants while others are not, it may be useful to subdivide the private schools into two categories: those aided and those not aided by public authorities.

The importance of private schools is shown by the fact that in some countries, such as Belgium, Lebanon, Malaya, and the Netherlands, the total pupil enrolment in private schools is equal to or higher than the enrolment in public schools. In other countries, such as Finland, India, Philippines, Portugal, Spain, and Thailand, the majority of pupils at the secondary level are found in private schools.

Since there is uneven development of education between urban and rural areas in many countries, and in order to focus attention on needed improvement in rural education, it may also be desirable to tabulate the basic statistics separately for urban and rural areas. For example, Haiti has 88 per cent of its population in rural areas, according to the 1950 census, but has less than 50 per cent of its primary school enrolment in rural primary schools. Ecuador, with about 70 per cent rural population, has only 53 per cent rural primary school enrolment; and Mexico, with about 65 per cent rural population, reports only 44 per cent of its primary school enrolment in rural schools.

Among those countries where the population is composed of different ethnic groups, as for example in the Federation of Malaya, there are special branches of the school system providing facilities for the education of the different ethnic groups, notably the Malayan, Indian and Chinese communities. Similarly, in Israel there are separate school systems for the Jewish and Arab populations, and in many of the countries and territories of Africa there are separate schools for the indigenous and non-indigenous sections of the population. In all such cases, it is useful to have school statistics tabulated separately by ethnic groups.

A universal aspect of all statistical tables relating to schools is that the pupils should be classified by sex, and a distinction made between the number of men teachers and the number of women teachers. It may also be useful, though not always necessary, to report separately on the number of schools for boys, the number of schools for girls, and the number of schools for boys and girls together. However, just as the total number of pupils enrolled is always a more meaningful item of information than the total number of schools, so the respective proportions of boys and of girls enrolled in all schools are more suitable for comparative purposes than the proportions of boys' schools, girls' schools, and mixed schools.

Tabulations by level and type of education

Though the basic elements of statistics—number of schools, teachers and pupils—are the same for all levels and types of education, the amount and kinds of detailed information to be presented in tables will vary according to each level and type. Generally speaking, the higher the level of education the more details are needed for presentation in statistical tables. The following discussion is based on tables which are recommended for international reporting, and some other tables which may be useful, at each level and for each type of education.

One difficulty frequently encountered in the tabulation of statistics by level of education is due to the fact that schools are often operated at more than one level. For example, kindergarten classes are often attached to primary schools; primary classes are conducted in secondary schools, etc. Here the number of schools, teachers and pupils involved should be separately reported under the level of education to which they belong. Thus the teachers and pupils in kindergarten classes attached to primary schools should *not* be included under 'education at the first level', but under 'education preceding the first level', where they belong. Similarly, primary classes attached to secondary schools should be reported under 'education at the first level' and *not* under 'education at the second level'. For example, Table 10, taken from *World Survey of Education*, Volume II, shows how data of this type are reported for Belgium, referring to 1954/55.

TABLE 10

Level of education	Teachers	Pupils
Pre-primary		
Public nursery schools	3 026	99 278
Public nursery schools attached to teacher training schools	39	842
Public nursery schools attached to secondary schools	(1)	7 095
Private nursery schools	6 135	226 448
Private nursery schools attached to teacher training schools	26	555
Primary		
Public primary schools	15 371	369 870
Public primary schools attached to teacher training schools	271	5 354
Public primary schools attached to secondary schools	(1)	51 824
Private primary schools	18 174	467 434
Private primary schools attached to teacher training schools	211	3 887

1. Teachers included with those of secondary schools.

EDUCATION PRECEDING THE FIRST LEVEL

More and more countries are reporting systematically on this type of education, whether provided by public or private bodies, or both. The essential elements for tabulation are: (a) number of schools; (b) number of teachers, by sex; and (c) number of pupils, by sex. It may be useful to give separate figures on different types of establishments at this level, for example, nursery schools, kindergartens, and infant schools, especially if they provide for children at different age levels. If special qualifications are required of teachers at this level, it is also desirable to show the numbers of teachers who have the required qualifications and of teachers who have not.

EDUCATION AT THE FIRST LEVEL

The same elements as above need to be reported at this level, with certain additional details, as may be appropriate. For example, it may be useful to show separately the number of one-teacher schools, since a large number of such schools exist in many countries, usually in the rural areas, and they create special problems of organization and teaching methods. It may be interesting to note that the number of one-teacher public schools in the United States of America has declined rapidly in recent years, but there were still 42,825 such schools in existence in 1953/54.[1]

The number of teachers need to be given by sex, and by qualification according to the practice of each country. The classifications used must vary with national standards and actual conditions. For example, in Ceylon, all teachers in English schools are classified by qualification in the following categories:[2]

Trained graduates
Graduates
Trained, first class
Trained, second class
Trained, provisional
Vocational trained
Bilingual trained
Gampaha trained
Certificated, first class
Certificated, second class
Certificated, third class
Third class service certificated
Provisional certificated
Intermediate Arts
Intermediate Science
Intermediate Economics and Commerce
Commercial certificated
Drawing certificated
Diploma in Science
Temporary science
Physical trained
Home science
Probationary teachers
Uncertificated teachers
Diploma in Sinhalese
Diploma in Tamil
Arabic teachers
Teachers of music
Teachers of dancing
Handicraft teachers
Unclassified teachers

Similar lists are used for the classification of teachers in Sinhalese schools, in Tamil schools, in unaided schools and in estate schools.

In England and Wales, teachers in full-time service in maintained or assisted schools are classified as follows:[3]

Qualified teachers: graduates, trained; graduates, not trained; graduate equivalent, trained; graduate equivalent, not trained; qualified by long service; other, trained; other, not trained.

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1. United States Office of Education, *Statistical Summary of Education, 1953-54*, p. 28.
2. Ceylon, *Administrative Report of the Director of Education* (annual).
3. Central Statistical Office, *Annual Abstract of Statistics*.

Other teachers: supplementary teachers; former uncertificated teachers; temporary teachers; other.

In other countries, the figures on teachers' qualifications may simply distinguish between trained and untrained teachers, or teachers with and without certificates. Another classification which may be appropriate under some circumstances is to show separately the numbers of full-time and of part-time teachers. This information would be useful, for example, in the computation of pupil-teacher ratios, or of requirements for additional teachers, or in the evaluation of the qualifications of teachers.

Where it is the national practice to report on all the personnel employed by the educational authorities, it is advisable to separate clearly the instructional staff (classroom teachers and other staff directly related to teaching functions) and non-instructional staff (personnel engaged in administration and in connexion with attendance, health, food, recreation and other services). For example, the United States Office of Education reports on the state school systems give statistics on the following categories of staff:[1]

Administrative personnel: members of boards of education; superintendents; assistant or deputy superintendents and other administrative staff.

Instructional personnel: consultants or supervisors of instruction; principals; classroom teachers; librarians; guidance personnel; psychological personnel.

Other non-instructional personnel: attendance officers; visiting teachers; health personnel (physicians, psychiatrists, dentists, nurses, dental hygienists, other health personnel); food services personnel; recreation personnel; secretarial and clerical personnel; plant operation personnel; plant maintenance personnel; transportation personnel; other employed personnel.

For international reporting, however, the category of teachers should include only the classroom teachers, and such principals, librarians and other staff who may also be engaged regularly in teaching.

As far as possible, the number of pupils should be reported by age and sex, or by grade and sex, for this and other levels of education (see pages 202-4). Where the problems of wastage and retardation are important, data on pupils by age and grade are needed for analysis and comparison. Some countries regularly compile and publish figures on the numbers of pupils promoted each year from one grade to the next, but the most useful data of this kind are the annual numbers of pupils who obtain school-leaving certificates or are otherwise considered to have completed their education at this level.

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[1] Office of Education, *Statistics of State School Systems: Organization, Staff, Pupils and Finances, 1953-54.*

Statistics on the number of pupils generally refer to enrolment (see discussion in Chapter V, under 'Statistics of Pupils'), but where the problem of absenteeism is serious, additional information may be given on the *attendance* of pupils. This may be done by giving either figures on 'average daily attendance', or the 'ratio of attendance to enrolment'.

Finally, the number of pupils in each class may be collected and tabulated in the form of a distribution of classes by size (see page 205).

EDUCATION AT THE SECOND LEVEL

This level of education includes three main types of school—schools providing general education, and those providing specialized education, particularly vocational and teacher-training schools. In view of the special interest in teacher-training institutions, both at this level and at the third level of education, it is desirable to have them tabulated separately from

TABLE 11

Type of school	Schools	Pupils
Secondary, general		
Public secondary schools	615	280 182
Public high schools	1 219	664 810
Private secondary schools	144	29 330
Private high schools	334	98 652
Technical branch of public new system schools	(1)	27 398
Scientific branch of public new system schools	(1)	30 856
Scientific branch of private new system schools	(1)	9 002
Secondary, vocational		
Public part-time vocational secondary schools	4 880	2 162 101
Public full-time vocational secondary schools	778	94 471
Public advanced full-time vocational schools	1 234	111 461
Private part-time vocational secondary schools	121	12 840
Private full-time vocational secondary schools	365	41 830
Private advanced full-time vocational schools	488	18 841

1. Number of public and private new system schools is shown under primary education.

the general and vocational schools. Furthermore, where general education at this level is provided in lower and higher stages, these should be distinguished in the tables for international reporting. On the other hand, vocational education may be classified by broad types, for example a practical type and a technical and scientific type of vocational education. Or separate figures may be given for vocational schools of agriculture, commerce, industry, arts and crafts, home economics, fine arts, etc. Finally, it may also be useful to distinguish between full-time and part-time vocational education at this level.

For example, in the *World Survey of Education*, Volume II, the types of schools reported for the Federal Republic of Germany in 1954/55 are shown in Table 11.

The number of teachers should be given by sex, and by qualification according to the practice of each country. In addition, it may be useful to distinguish between full-time and part-time teachers, particularly as the number of part-time teachers may be relatively important in vocational education. For example, in the Federal Republic of Germany, in 1956, there were 41,700 part-time teachers as compared with 33,300 full-time teachers in all vocational secondary schools. In Norway, in 1954, the number of part-time vocational teachers (4,487) was more than twice the number of full-time teachers (2,141). Even in general secondary schools, Sweden in 1954 had more than 1 part-time teacher to every 3 full-time teachers, while Switzerland in 1953 had more than 1 part-time teacher to every 5 full-time teachers. In Japan, in 1957, about 1 out of every 12 teachers was a part-time teacher in all secondary schools (including general and vocational schools).

Similarly, it may be of interest to show the number of pupils, by sex, classified as full-time or part-time, especially where part-time vocational education is important, as in Germany, the Netherlands and the Scandinavian countries. As in the case of primary schools, it is desirable, wherever possible, to have a cross-tabulation of secondary school pupils by age, grade and sex, or at least by age and sex or by grade and sex (see page 199).

Other classifications of pupils which may be useful include such characteristics as ethnic group, nationality, and social origin. However, these elements are less susceptible to international comparisons, owing to the lack of common definitions.

Finally, the number of pupils who succeed in the final examinations, or who obtain diplomas upon completion of the second level of education is of importance in international reporting. When compared with the enrolment of first-year pupils, it can show the relative wastage and net output of secondary schools. Taken in connexion with figures on admissions to universities and other higher educational institutions, it can give an indication of the net addition each year of educated and trained manpower to the labour force of the nation. In presenting statistics on the number of students who passed final examinations or obtained diplomas each year, it is useful to give at the same time the number of candidates for the examinations, in order to show the percentage of successful candidates. Some examples showing the percentage of candidates passing various types of terminal examination at the second level of education are given in Table 12.

TABLE 12

Country and year	Type of examination	Number of candidates	Passes: Number	Passes: Per cent
Austria, 1955/56	Reifeprüfung	3 675	3 214	87
Colombia, 1957	Secondary, 6th year	6 822	5 175	76
France, 1958	Baccalauréat, 1st part	100 900	37 900	38
	Baccalauréat, 2nd part	73 340	32 550	44
India, 1953/54	Matriculation and equivalent exam.	818 620	397 005	48
Ireland, 1956	Leaving certificate	6 625	5 671	86
Israel, 1955/56	Matriculation	3 626	2 299	63
Italy, 1954/55	Maturita	34 346	24 116	70
Norway, 1956	Examen artium	4 748	4 241	89
Philippines, 1955/56	Public high school, 4th year	44 376	43 623	98
Portugal, 1956/57	Ensino liceal, 3° ciclo	6 843	3 004	44
Thailand, 1955	Senior secondary	21 448	18 862	88
	Pre-university	6 421	3 068	48
United Kingdom: England and Wales, 1956	General certificate of education (ordinary)	1 068 813	645 616	60
	General certificate of education (advanced)	150 821	105 466	70

EDUCATION AT THE THIRD LEVEL

This level of education includes universities and other institutions of higher education, including teacher training institutions. Statistics of teacher training institutions at the third level of education should preferably be tabulated separately, along with teacher-training schools of the second level (see page 175). For the rest, some distinction should be made between university and non-university institutions, or between degree-granting and non-degree-granting institutions. In reporting the number of schools, the question may arise whether a university or equivalent institution should be treated as one unit or whether each faculty, department or 'school' of the university should be considered a separate unit. A practical solution of this problem would seem to depend on whether there is a centralized register of teachers and students for the institution as a whole, or only separate registers for the various faculties, departments and schools constituting the whole institution. Where such a central register exists, or can easily be compiled from the registers of the separate constituent parts, it is preferable to treat the whole institution as a reporting unit, in order to avoid double-counting of the teachers and students. On the other hand, where registers are kept separately, and cannot easily be combined for statistical reporting, then obviously each constituent will have to be regarded as a separate reporting unit. Practice in this respect varies in the national reports on higher education available to the Unesco Secretariat. For example, in the United Kingdom,[1] a total of 29 institutions are treated as separate reporting units in the summary tables. Among these are two colleges shown under Durham University, and four university colleges and a school of medicine shown under the University of Wales, but the 'University of London, including the Colleges and Schools' is shown as one unit. However, supplementary tables give detailed information on 35 colleges and schools which constitute the University of London, not including such entities as the Institute of Advanced Legal Studies, the Institute of Classical Studies, the Institute of Germanic Languages and Literatures, and the Institute of Common-

TABLE 13

Type of institution	Public	Private
Universities	79	60
Liberal arts colleges	81	647
Teachers' colleges	168	24
Technological schools	22	22
Theological schools	—	124
Other professional schools	10	110
Junior colleges	290	213
TOTAL	650	1 200

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[1] University Grants Committee, *Returns from Universities and University Colleges in receipt of Treasury Grant, 1956-1957.*

wealth Studies, since the students attending these institutions are included in the returns of other university institutions.

In the United States of America,[1] the total number of institutions reported for continental United States (not including Alaska, Canal Zone, Guam, Hawaii, and Puerto Rico) in 1955-56 was 1,850; the types of institution are shown in Table 13.

It is stated that the unit of count is the administrative organization: 'A university may operate in several localities and some of its branches may conduct a programme almost as varied as that of the main university. For purposes of the present tabulation, however, the organization constitutes one institution.'

In India,[2] the number of universities reported for 1952-54 was 30, of which 9 were residential and teaching institutions, 3 were purely affiliating institutions, and 16 had both teaching and affiliating functions. Of the remaining two institutions, Bombay University changed its character during this period from 'teaching and affiliating' to 'teaching and federal', while Delhi University, which had been a teaching and federal institution, became a teaching and affiliating one. Instruction at the university level was given in 300 university teaching departments, 167 university colleges and constituent colleges, and 657 affiliated colleges. Of the total number of 824 colleges, 439 provided instruction for general education, 196 for professional education, and 189 for both general and professional education.

The principal value of the count of institutions of higher education is that it ensures that all appropriate institutions are included in the statistical report, and that double-counting of teachers and students is avoided, as far as possible. Apart from this, there is no great significance in the actual number of institutions counted as separate units. Certainly there is no value in international comparisons based on the numbers of higher educational institutions without regard to the numbers of teachers and students. It is these latter elements which are appropriate for comparison, and should therefore be reported on a more uniform basis.

In reporting the number of teachers at the third level of education, there is great variety in the practices of the different countries, owing to traditional methods of classification. In general, it may be observed that statistics of teachers in universities and other higher educational institutions usually distinguish between full-time and part-time teachers, between men and women teachers, and between the teaching staff proper

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[1] Office of Education, *Statistics of Higher Education: Faculty, Students, and Degrees, 1955-56.*

[2] Ministry of Education and Scientific Research, *Education in Universities in India, 1952-54.*

(which includes professors and lecturers of different grades) and the auxiliary instructional staff (such as assistants, demonstrators, etc.). Non-instructional staff, such as administrators, librarians, laboratory technicians, etc. are sometimes also included in national statistics, though usually in separate categories from the teaching staff. The question of double-counting may arise because the same teacher may be teaching in more than one institution, or occupy more than one type of position. The following examples will illustrate some of the ways in which national statistics are presented on this subject.

In Canada,[1] for 1954, the total teaching staff in universities and colleges was reported, according to whether full-time or part-time and by sex, as follows: full-time teachers: 6,669 male, 1,343 female; part-time teachers: 4,764 male, 724 female.

A distribution of the full-time teaching staffs in certain institutions was given, according to the following categories: deans, professors, associate professors, assistant professors, instructors and lecturers.

The relative importance of each of these categories of staff may be seen from another report[2], covering 51 universities and colleges which enrolled about 80 per cent of all full-time students in higher education in 1956/57. This report contains detailed data on a total of 4,964 full-time staff members, including 4,407 teachers with the academic rank of lecturer or instructor or higher, 202 professionals without academic rank, and 355 semi-professional staff. The first group is made up of the following categories by rank: 141 deans, 1,185 professors, 972 associate professors, 1,113 assistant professors, 211 professors (ungraded), 785 lecturers and instructors, total, 4,407.

The 202 professional staff members without academic rank included research associates and assistants with university degrees, museum curators and lecturers, preceptors, and directors of physical education. The 355 semi-professionals included demonstrators, technicians, mechanicians, medical artists and photographers, field workers, and assistants without university degrees.

For the Federal Republic of Germany[3] Table 14 shows (as at 28 February 1953), the categories of teaching and auxiliary staff reported for all universities and other higher educational institutions.

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[1] Dominion Bureau of Statistics, *Survey of Higher Education, 1952-54.*

[2] Dominion Bureau of Statistics, *Salaries and Qualifications of Teachers in Universities and Colleges, 1956-1957.*

[3] Statistisches Bundesamt, *Hochschulen und lehrerbildende Anstalten, Heft 1, Die Hochschulen in Wintersemester 1953/54.*

TABLE 14

Category of staff	Total	Female
A. Lehrpersonen (teaching staff):	*6 747*	*186*
(1) Ordentliche Professoren (ordinary professors)	1 651	2
(2) Planmässige ausserordentliche Professoren (extraordinary professors)	306	9
(3) Emeriti mit Lehrtätigkeit (retired professors still teaching)	129	—
(4) Emeriti ohne Lehrtätigkeit (retired professors not teaching)	406	—
(5) Honorar-Professoren (honorary professors)	404	—
(6) Beamtete ausserplanmässige Professoren (non-titular professors with status of functionary)	578	10
(7) Sonstige beamtete Nichtordinarien (other non-titular staff with status of functionary)	51	5
(8) Nichtbeamtete ausserplanmässige Professoren (non-titular professors without status of functionary)	353	8
(9) Beamtete Dozenten (appointed lecturers)	696	18
(10) Nichtbeamtete Dozenten (independent lecturers)	528	16
(11) Habilitierte Lehrbeauftragte und Lektoren (lecturers who have passed 'habilitation')	266	5
(12) Gast-Professoren und -Dozenten (visiting professors and lecturers)	83	—
(13) Nichthabilitierte Lehrbeauftragte und Lektoren (lecturers who have not passed 'habilitation')	1 174	95
(14) Sonstige Lehrpersonen (other teaching staff)	122	18
B. Wissenschaftliches Hilfspersonal (auxiliary professional staff)	*4 135*	*378*
(15) Planmässige Assistenten ohne Habilitation (scheduled assistants)	2 750	184
(16) Nichtplanmässige Assistenten ohne Habilitation (unscheduled assistants)	1 385	194

In Italy,[1] the teaching staff in higher education for 1955/56 was reported in the categories shown in Table 15.

TABLE 15

Category of staff	Total		Female
(1) Professori di ruolo (professors on roster)	1 947		36
(a) Including: professori ordinari (full professors)		(1 399)	
(2) Professori incaricati (professors-in-charge)	4 274		311
(a) Including: non di ruolo (not on roster)		(2 911)	
(3) Liberi docenti (independent lecturers)	7 374		256
(a) Including: che hanno tenuto il corso (those who gave courses)		(2 132)	
(4) Aiuti e assistenti (assistants)	13 799		2 299
(a) Including: di ruolo (on roster)		(2 589)	

[1] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana, 1957*.

The first two categories are not mutually exclusive, since the total number of professors is shown elsewhere in the same report as 4,858, counting the *professori de ruolo* and the *professori incaricati non di ruolo.* The *professori incaricati* also include 324 teachers of secondary schools, of whom 29 were called to teach at the university (*comandati all'universita*).

In Japan,[1] for 1957, there were reported 46,631 full-time and 21,753 part-time teachers in all universities and junior colleges. Distribution by type of position and by sex is shown in Table 16.

TABLE 16

Type of position	Staff		
	Total	Male	Female
Full-time teachers	*46 631*	*42 458*	*4 173*
President	401	357	44
Professor	12 465	12 039	426
Assistant professor	11 669	10 888	781
Lecturer	7 938	6 745	1 193
Assistant	14 158	12 429	1 729
Part-time teachers	*21 753*	*20 492*	*1 261*
President	93	89	4
Professor	2 386	2 339	47
Assistant professor	1 062	966	96
Lecturer	16 254	15 267	987
Assistant	1 958	1 831	127

In the Netherlands,[2] for the year 1955/56, there were a total of 1,367 persons on the teaching staffs, and 2,571 on the auxiliary staffs of the universities and other institutions of higher education. Table 17 shows the distribution by type of position and by sex.

TABLE 17

Type of position	Staff	
	Total	Female
A. Docerend personeel (teaching staff):	*1 367*	*48*
(1) Gewoon hoogleraren (titular professors)	626	10
(2) Buiten-gewoon hoogleraren (non-titular professors)	182	7
(3) Bijzonder hoogleraren (special professors)	81	—
(4) Lectoren (readers)	158	11
(5) Privaat-docenten (independent lecturers)	102	11
(6) Andere docenten (other lecturers)	245	11
B. Wetenschappelijke staf (auxiliary professional staff)	*2 571*	*300*
(7) Wetenschappelijke ambtenaar (principal assistants)	931	94
(8) Hoofdassistenten (senior assistants)	239	31
(9) Assistenten (assistants)	1 401	175

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1. Ministry of Education, *Education in 1957.*
2. Central Bureau of Statistics, *Statistics of Higher Education, 1954/55-1955/56.*

The total numbers of the teaching staffs do not correspond to the sums of the various categories, since there is double-counting involved—some of the persons being included in more than one category.

In the United Kingdom,[1] the report of the University Grants Committee for 1956/57 shows the numbers of full-time staffs employed in the teaching departments of the universities, totalling 10,485 persons, distributed by rank as follows: 1,459 professors, 757 readers, assistant professors and independent lecturers, 1,131 senior lecturers, 4,903 lecturers, 1,176 assistant lecturers and demonstrators, and 1,059 others, total, 10,485. It is stated that 676 lecturers, assistant lecturers and demonstrators, etc, at Cambridge University, and 381 at Oxford University are excluded since, with few exceptions, they combine university with college work, hence are not considered as full-time staff in the teaching departments of the universities.

TABLE 18

Type of position	No. of positions	
	Public institutions	Private institutions
(1) Faculty for general administration	8 640	13 509
(2) Faculty for resident instruction in college-grade courses:		
(a) With rank of instructor or above	97 354	100 603
(b) Junior instructional staff	15 747	14 484
(3) Professional library staff	4 062	4 382
(4) Instructional staff for non-college-grade vocational and adult education courses	5 325	2 957
(5) Faculty for organized research	16 170	10 406
(6) Extension faculty giving college-grade and non-college-grade courses	8 942	3 156
(7) Other extension faculty	14 328	137
(8) Other faculty, including faculty for correspondence courses, short courses, and individual lessons	6 361	4 309
(9) Faculty for elementary or secondary instruction:		
(a) In high school grades of unified high school-junior colleges	191	847
(b) In laboratory, demonstration, or training schools	5 109	2 017
TOTAL	182 229	156 807

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[1] University Grants Committee, *Returns from Universities and University Colleges in receipt of Treasury Grant, Academic Year 1956-57.*

In the United States of America,[1] the Office of Education reports a total of 298,910 faculty members, as of November 1955, in all institutions of higher education in continental United States, of whom 77 per cent were men and 23 per cent women. They were distributed by type of position, and by type of institution, whether public or private as shown in Table 18.

It is stated that these figures refer to the number of positions and not of persons, hence a faculty member occupying more than one position is counted once for each type of position he holds. Furthermore, except for category 2(a), the numbers have not been reduced to full-time equivalents. For category 2(a), the full-time equivalents of these positions in public and private institutions are also given as 77,313 and 74,008 respectively. Category 2(b) includes assistant instructors, teaching fellows, teaching assistants, and laboratory assistants. Category 7, 'Other extension faculty', includes, for example, agricultural and home economics extension staff operating at or from the land-grant colleges, and district and county extension agents for agriculture, home demonstration, and 4-H clubs.

In Yugoslavia,[2] a total teaching staff of 2,191, and an auxiliary staff of 3,024, are reported for 1956/57. Table 19 shows their distribution by type of position and by sex.

TABLE 19

Type of position	Staff	
	Total	Female
A. Nastavno osoblje (teaching staff):	*2 191*	*105*
(1) Redovni profesori (full professors)	389	2
(2) Vanredni profesori (assistant professors)	464	15
(3) Docenti (lecturers)	502	41
(4) Predavači (visiting lecturers)	112	16
(5) Honorarno (temporary teaching staff)	724	31
B. Saradnici u nastavi (auxiliary teaching staff):	*3 024*	*857*
(6) Asistenti (assistants)	1 832	515
(7) Profesori srednjih škola na fakultetima (teachers in secondary schools attached to the faculties)	159	105
(8) Ostali (others)	174	55
(9) Honorarni (temporary staff)	859	182

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[1] Office of Education, *Statistics of Higher Education, 1955-56: Faculty, Students, and Degrees.*

[2] Institut Fédéral de Statistique, *Enseignement Supérieur, 1956/57* (*Bulletin Statistique*, No. 120).

As regards statistics on student enrolment in higher education, the main classifications of interest in international reporting are those concerning the sex, nationality, and field of study of the students. It may be useful to keep the distinction between undergraduate students, preparing for their first degree, and postgraduate students, preparing for more advanced degrees. Further details should be given, on the one hand, as to the number of first-year students, and on the other, as to the number of students who obtain degrees or diplomas during the year, classified by field of study and by type of degree or diploma.

A major difficulty in this area is to find a classification by field of study which would be useful for international comparison. The practice of most countries is to classify students by the institution or faculty in which they are enrolled, and/or by field of study. However, the classification by field of study is far from comparable between one country and another. This is largely due to differing national characteristics in the organization of higher education, but it is also due to the rapid development of relatively new fields of study which do not easily fit into the traditional 'disciplines'. The following examples, taken from official publications of a few countries, will be sufficient to illustrate the problem. The official statistics of Austria,[1] showing the student enrolment in the winter semester of 1957/58, in universities by faculty and in other institutions by type of institution, are reproduced in Table 20.

TABLE 20

Faculty or type of institution	Student enrolment	
	Total	Female
Universities:	*14 970*	*4 237*
Theological faculties	1 106	65
Law and political science faculties	4 359	614
Medical faculties	3 243	814
Philosophy faculties	6 262	2 744
Other institutions:	*27 296*	*6 043*
Non-university institutions	25 166	5 139
Fine arts schools	2 130	904

The theological faculties are further divided into Catholic and Evangelical. Under the law and political science faculties, separate figures are given for students of political science, international studies, and

[1] Österreichisches Statistisches Zentralamt, *Österreichische Hochschulstatistik, Wintersemester 1957/58.*

economics. Under the philosophy faculties, some forty different fields of study are shown including philosophy, psychology, pedagogy, sociology, history, philology, mathematics, physics, chemistry, natural history, etc. Under the non-university institutions, students are classified by such fields of study as architecture, architectural engineering, machine construction, electro-technology, technical chemistry, technical physics, agriculture, forestry, horticulture, animal husbandry, commercial science, etc.

In Belgium,[1] student enrolment for the academic year 1958/59 in all universities and other institutions of higher education, is reported by field of study as shown in Table 21.

TABLE 21

Field of study	Student enrolment	
	Total	Female
(a) Theology	179	—
(b) Canon law	16	—
(c) Religious sciences	84	56
(d) Philosophy (St. Thomas School)	291	42
(e) Philosophy, letters, and related sections	4 087	1 690
(f) Law, and related sections	3 288	494
(g) Science	3 826	993
(h) Medicine, pharmacy, and related sections	7 881	1 415
(i) Veterinary medicine	400	—
(j) Applied sciences, arts and manufactures	3 749	19
(k) Agronomy	677	9
(l) Social, political and economic sciences	1 963	330
(m) Commercial sciences	4 600	591
(n) Pedagogy and psychology	1 023	470
(o) Inter-faculty centres	148	6
Total enrolment	32 212	6 115
Total number of students	(28 275)	(5 177)

In Brazil,[2] students enrolled at the beginning of the academic year 1957 are reported by state, by university, and by field of study. The classification by field of study contains 25 major headings, as shown in Table 22.

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[1] Fondation Universitaire, Bureau de Statistiques Universitaires, *Rapport Annuel, 1959.*

[2] Ministerio da Educação e Cultura, *Sinopse Estatística do Ensino Superior, 1957.*

TABLE 22

Field of study	Student enrolment	
	Total	Female
(1) Administration, public and private	771	66
(2) Civil aeronautics	135	—
(3) Agronomy	1 428	39
(4) Liberal arts (drama, fine arts, choreography, music)	2 386	1 922
(5) Librarianship	288	272
(6) Economics, accounting and actuarial sciences	5 820	413
(7) Diplomacy	46	6
(8) Law	21 698	2 718
(9) Home economics	34	34
(10) Physical education	693	366
(11) Nursing	1 581	1 541
(12) Engineering	10 151	388
(13) Statistics	189	14
(14) Pharmacy	1 595	542
(15) Philosophy, science, and letters	14 669	9 140
(16) Journalism	426	159
(17) Medicine	10 323	1 210
(18) Museology	43	34
(19) Dentistry	4 868	814
(20) Civil police (including criminology)	164	—
(21) Industrial chemistry	95	14
(22) Public health	74	—
(23) Social service	1 101	825
(24) Sociology and political science	165	29
(25) Veterinary science	762	25
TOTAL	79 505	20 571

The field of engineering is subdivided into 16 subject areas, including architectural, civil, aeronautical, mining, petroleum, electronic, geological, industrial, mechanical, electrical, metallurgical, chemical and town planning engineering. In the field of 'philosophy, science and letters' are 15 subject areas including social sciences, philosophy, physics, geography, history, literature, natural history, mathematics, physics, chemistry, pedagogy and training of secondary school teachers.

In Colombia,[1] students enrolled in universities and non-university institutions of higher education are reported for 1957 by field of specialization as shown in Table 23.

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[1] Ministerio de Educación Nacional, *Educación Superior, 1957.*

TABLE 23

Field of specialization	Student enrolment	
	Total	Female
In university faculties:	*14 144*	*1 368*
(A) Industrial administration	27	2
(B) Agronomy	431	21
(C) Architecture	1 341	129
(D) Law	2 835	274
(E) Economics	662	29
(F) Chemistry and pharmacy	287	52
(G) Philosophy and letters	244	122
(H) Ecclesiastical faculties	255	—
(I) Geography	16	1
(J-1) Civil engineering	1 611	12
(J-2) Electrical engineering	234	3
(J-3) Forestry engineering	14	—
(J-4) Mechanical engineering	238	—
(J-5) Electronic engineering	42	—
(J-6) Metallurgical engineering	30	—
(J-7) Mining engineering	309	—
(J-8) Petroleum engineering	134	—
(J-9) Chemical engineering	482	34
(J-10) Electro-mechanical engineering	94	—
(K) Medicine	3 101	147
(L) Veterinary medicine	194	8
(M) Dentistry	966	236
(N-1) Teaching of biology and chemistry	123	50
(N-2) Teaching of philology and languages	146	91
(N-3) Teaching of mathematics and physics	92	42
(N-4) Teaching of psychology and education	78	48
(N-5) Teaching of social and economic sciences	80	39
(O) Psychology	51	28
(P) Natural resources	26	—
In other higher institutions:	*997*	*796*
(A) Bacteriology	360	360
(B) Librarianship	47	27
(C-1) Science of education	114	53
(C-2) Social sciences and pedagogy	10	10
(C-3) Co-operatives	27	14
(C-4) Fundamental education	18	4
(C-5) Physical education	52	28
(D) Accounting	36	—
(E) Nursing	159	159
(F) Physiotherapy	44	44
(G) Languages	74	41
(H) Social service	56	56
TOTAL	15 141	2 164

In India,[1] enrolment in university teaching departments and colleges, by faculties, in 1953/54, is given as shown in Table 24.

TABLE 24

Faculty	Student enrolment	
	Male	Female
General education	*398 152*	*61 576*
Arts	245 849	47 828
Science	150 281	12 953
Oriental learning	1 253	225
Others	769	570
Professional education	*114 385*	*6 105*
Agriculture	5 041	12
Commerce	52 855	269
Education	4 803	2 243
Engineering and technology	15 591	22
Law	18 354	352
Medicine	15 639	3 117
Veterinary science	1 635	7
Others	467	83
TOTAL	512 537	67 681

In Rumania,[2] the number of students enrolled in higher education, for 1957/58, is reported at 80,919, including 51,094 enrolled in day courses, 350 in evening courses, and 29,475 in courses where attendance is not obligatory. The distribution of these students by field of specialization is given in Table 25.

In compiling international tables on student enrolment by field of study, the Secretariat of Unesco has used a list of 10 categories, as follows:

(1) *Humanities:* archeology, history, languages, letters, library science, philosophy, psychology, theology, and similar subjects.

(2) *Education:* education, pedagogy, physical education.

(3) *Fine arts:* architecture, drawing, music, painting, sculpture, speech and dramatic arts, and similar subjects.

(4) *Law.*

(5) *Social sciences:* banking, commerce, diplomacy, economics, ethnology, geography, home economics, international relations, journalism, political science, public administration, social welfare, sociology, statistics, and similar subjects.

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[1] Ministry of Education and Scientific Research, *Education in Universities in India, 1952-54*.
[2] Direction Centrale de Statistique, *Annuaire Statistique de la R.P.R., 1958*.

(6) *Natural sciences:* astronomy, bacteriology, biochemistry, biology, chemistry, entomology, geology, geophysics, mathematics, meteorology, mineralogy, physics, zoology, and similar subjects.

(7) *Engineering:* applied science, construction, geodesy, metallurgy, mining, surveying, technology, textiles, and similar subjects.

(8) *Medical science:* anatomy, dentistry, medicine, midwifery, nursing, optometry, osteopathy, pharmacy, physiotherapy, public health, and similar subjects.

(9) *Agriculture:* agronomy, dairying, fisheries, forestry, horticulture, rural science, veterinary medicine, and similar subjects.

(10) *Other.*

TABLE 25

Field of specialization	Student enrolment	
	Total	In day courses
(1) Mining	1 126	779
(2) Petroleum	1 709	1 320
(3) Electric energy and electro-technology	3 946	2 413
(4) Metallurgy and mechanical construction	6 750	4 319
(5) Industrial chemistry	2 716	1 668
(6) Timber industry	264	264
(7) Light industry	739	477
(8) Food industry	786	534
(9) Transport and telecommunications	2 095	1 217
(10) Architecture and building construction	5 871	3 779
(11) Agriculture	6 416	5 145
(12) Veterinary medicine	729	729
(13) Sylviculture	1 278	936
(14) Medicine	8 828	8 828
(15) Pharmacy	808	808
(16) Philology	6 344	4 178
(17) Philosophy	653	587
(18) History, geology, geography	545	444
(19) Natural sciences	3 918	1 935
(20) Chemistry	1 241	1 241
(21) Mathematics	3 974	2 259
(22) Pedagogy	2 370	1 610
(23) Legal sciences	8 032	1 518
(24) Economic sciences	7 776	2 556
(25) Physical culture and sports	636	377
(26) Plastic and decorative arts	430	394
(27) Theatre and cinematography	308	238
(28) Music	631	541
TOTAL	80 919	51 094

This minimum classification has been found on the whole satisfactory for international reporting. In fact, it has been reproduced in some national publications, such as the annual statistical reports on higher education in Austria,[1] and a summary report on educational and cultural statistics for Colombia.[2]

An even greater difficulty arises in the classification of students by stages within the level of higher education. Thus Canada,[3] for example, reports full-time student enrolment in two broad categories: (a) those taking undergraduate degree and diploma courses, and (b) those doing graduate work. The United States of America,[4] reports on resident student enrolment, of college grade, separately for undergraduate and graduate students, not including those enrolled in summer sessions. In its annual report on education, Japan[5] classifies university students as enrolled in: (a) post-graduate school, (b) regular course, (c) advanced course, (d) short course and other.

In India,[6] university and college student enrolment is reported by 'standards', consisting of the following categories: (a) intermediate, (b) graduate, (c) post-graduate, (d) doctorate, (e) diploma or certificate.

In the United Kingdom,[7] students in universities and university colleges are classified as: (a) advanced (including students working for higher degrees and certain higher diplomas, and also those undertaking post-graduate work though not for a degree or diploma), (b) first degree, (c) first diploma, (d) others.

In France,[8] university students are classified under each faculty according to the degree or diploma for which they are working. Thus, under the faculties of law they are classified as follows: (a) *capacité en droit*, (b) *licence en droit*, (c) *diplômes d'études supérieures*, (d) *doctorat en droit*, (e) *diplômes et grades universitaires: doctorat et autres diplômes*, (f) *ni grade ni diplôme*. Under the faculties of science, the various categories are: (a) *certificats d'études P.C.B.* (physique, chimie, biologie), (b) *certificats d'études supérieures en vue de la licence*, (c) *diplômes*

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[1] *Österreichische Hochschulstatistik*.

[2] Departamento Administrativo Nacional de Estadistica, *Estadisticas Culturales, 1957 (Resumen para uso internacional)*.

[3] Dominion Bureau of Statistics, *Fall Enrolment in Universities and Colleges, 1958*.

[4] Office of Education, *Statistics of Higher Education: Faculty, Students, and Degrees, 1953-54*.

[5] Ministry of Education, *Education in 1957*.

[6] Ministry of Education and Scientific Research, *Education in Universities in India, 1952-54*.

[7] University Grants Committee, *Returns from Universities and University Colleges in receipt of Treasury Grant, 1956-1957*.

[8] Bureau Universitaire de Statistique, *Statistiques de l'Enseignement Supérieur Public, 1957-58* (Informations statistiques: Supplément au *Bulletin Officiel de l'Education Nationale*).

d'études supérieures, (d) *titre d'ingénieur docteur*, (e) *doctorat d'État*, (f) *agrégation*, (g) *certificat d'aptitude à l'enseignement du 2ème degré*, (h) *diplômes universitaires: doctorat et autres diplômes*, (i) *brevets, diplômes, certificats divers*, (j) *ni grade, ni diplôme*, (k) *3ème cycle d'enseignement*. Similar classifications are used for the other faculties.

Another classification used in national statistics on higher education is the distribution of students by year of study, similar to the grade distribution of pupils in primary and secondary schools. Thus Italy[1] reports the following distribution of students in higher education, in 1955/56, by year of study, as follows: first year of study, 40,536; second year, 32,030; third year, 28,641; fourth year, 27,431; fifth year, 6,518; sixth year, 3,862; total, 139,018.

It should be noted that in Italy, fifth-year students are enrolled only in certain faculties, such as medicine, engineering, natural sciences, etc., while sixth-year students are enrolled only in the medical faculties.

In Spain,[2] a table on student enrolment in universities for 1955/56 shows the number of students enrolled, by sex and by age, classified by faculty and by year of study within each faculty. Five years of study are shown under each faculty, except medicine and pharmacy where there are no first-year students. In the medical faculties the students are reported from second to seventh year of study; in pharmacy from second to sixth year.

In the Federal Republic of Germany,[3] students enrolled in higher education are classified by field of study and by semester of study. In the winter semester of 1957/58, the number of German students (i.e., excluding foreign students), was distributed by semester of study, and by sex, as shown in Table 26.

TABLE 26

Semester of study	Male	Female	Semester of study	Male	Female
First	11 755	2 594	Eighth	8 121	1 795
Second	13 284	4 951	Ninth	6 367	892
Third	10 672	2 244	Tenth	4 039	949
Fourth	12 054	3 742	Eleventh	3 788	508
Fifth	8 169	1 710	Twelfth	5 935	709
Sixth	10 524	3 057	Unstated	131	42
Seventh	8 899	1 437			
			TOTAL	103 738	24 630

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[1] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana, 1957*.

[2] Instituto Nacional de Estadística, *Estadística de la Enseñanza en España, curso 1955-56*.

[3] Statistisches Bundesamt, *Die Studierenden an den wissenschaftlichen Hochschulen im Wintersemester 1957/58*.

Another method is used in the Netherlands,[1] where students enrolled in universities are classified by faculty, by sex and by year of enrolment. Thus, in 1955/56, the numbers of university students by year of enrolment were as shown in Table 27.

TABLE 27

Year of enrolment	Male students	Female students	Year of enrolment	Male students	Female students
First (1955/56)	3 850	857	Eighth (1948/49)	1 611	325
Second (1954/55)	3 155	735	Ninth (1947/48)	1 211	185
Third (1953/54)	2 575	615	Tenth (1946/47)	929	159
Fourth (1952/53)	2 279	543	Eleventh (1945/46)	1 073	141
Fifth (1951/52)	2 282	513	Enrolled before 1945	845	242
Sixth (1950/51)	2 445	441			
Seventh (1949/50)	2 227	395			
			TOTAL	24 482	5 151

Obviously, the method of counting students by year of enrolment would not yield the same results as that of counting them by year of study, particularly in the later years. However, for comparative purposes the most useful figures are the annual numbers of first-year students, and at this stage there is not much difference between a count by year of study and a count by year of enrolment. It may be of interest to note

TABLE 28

Type of institution	First-time students in any college	Percentage of total resident enrolment
Universities	245 904	20.4
Liberal arts colleges	201 421	28.3
Teachers' colleges	67 301	29.2
Technological schools	20 376	23.6
Theological schools	4 789	14.9
Other professional schools	12 356	21.3
Junior colleges	157 304	46.6
Total, November 1955	709 451	26.7
November 1954	649 858	26.8
November 1953	580 535	26.2
1951/52	529 950	23.0
1941/42	379 070	27.0
1931/32	336 997	29.2

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[1] Central Bureau of Statistics, *Statistics of Higher Education, 1954/55-1955/56*.

that in the United States of America,[1] while the number of 'first-time students in any college' in 1955 was more than double that in 1931/32, they actually constituted a smaller percentage of the total enrolment (see Table 28).

Other classifications of student enrolment which may be useful are distributions (a) by age and (b) by social origin. Instead of by age, some countries, such as France and Germany, give the distribution by year of birth, which can of course be translated into approximate age groups. The Belgian table gives both the year of birth and the age in years, ranging from 16 to 65. Other examples of age groups used are: single years from 16 to 24, 25 and over (Portugal); under 17, single years from 17 to 40, over 40 (Netherlands); under 18, single years from 18 to 24, over 24 (Spain); under 19, single years from 19 to 29, 30-34, 35 and over (Austria); under 20, single years from 20 to 29, 30-34, 35-39, 40 and over (Yugoslavia).

In a number of countries, statistics are published regularly or occasionally on the social origin of students, usually according to the occupation of the father. For example, in Austria,[2] the occupation of the father is classified in one of eight main categories: (1) publicly employed, (2) privately employed, (3) self-employed (excluding liberal professions), (4) liberal professions, (5) workers, (6) pensioners, (7) landlords, (8) occupation not specified. In France,[3] the distribution of French students

TABLE 29

Parents' occupation	Per 1000 students	
	Male	Female
Liberal professions	120	116
Heads of industrial or commercial enterprises	72	81
Government officials and employees	267	316
Employees in industry and commerce	156	140
Artisans and retail merchants	126	124
Farm owners and workers	60	60
Industrial workers	36	29
Landlords and persons without occupation	40	37
Occupation undefined	123	97
TOTAL	1 000	1 000

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[1] Office of Education, *Statistics of Higher Education, 1955-56: Faculty, Students, and Degrees.*

[2] *Österreichische Hochschulstatistik, Winterhalbjahr 1953/54*, p. 100.

[3] *Statistiques Scolaires et Professionnelles* (Informations statistiques, supplément au *Bulletin Officiel de l'Education Nationale*, May 1957).

in all universities, 1955/56, by occupation of parents, was reported as shown in Table 29.

In Germany,[1] statistics on this subject are regularly published, with cross-classification of students by father's occupation and by the methods of financing their studies. The father's occupation is classified separately for graduates and non-graduates of higher educational institutions, for various categories of government officials and other employees, professionals, farm owners, merchants and tradesmen, skilled and unskilled workers, etc.

In Italy,[2] a special tabulation gives the number of first-year university students in the academic year 1955/56, cross-classified by field of study and by economic activity and social status of the father. The latter classification distinguishes the following types of economic activity: (1) agriculture, hunting and fishing; (2) industry; (3) transport and communications; (4) commerce and services; (5) credit, insurance and finance; (6) public administration and social institutions; (7) activity unknown. Within each type of economic activity, seven categories of social status are given. Summing up by social status of the father, the numbers of first-year students were as shown in Table 30.

TABLE 30

Social status of father	First-year students	
	Total	Female
Entrepreneurs and professional	5 195	1 669
Managers and salaried employees	16 451	5 470
Workers on own account	9 673	2 259
Wage earners	4 163	746
Unpaid family workers	60	16
Status unknown	1 274	322
Non-occupational status	259	71
TOTAL	37 075	10 553

The Netherlands,[3] has periodically published tables cross-classifying students by father's occupation and by the university and faculty in which they were enrolled. The father's occupation is shown in one of 16 categories, which are grouped in three major groups—higher, middle, and lower. Table 31 shows the number of students coming from each of these social groups in 1954/55.

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[1] Statistisches Bundesamt, *Die Studierenden an den wissenschaftlichen Hochschulen im Wintersemester 1957/58*.

[2] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana, 1958*.

[3] Central Bureau of Statistics, *Statistics of Higher Education, 1954/55-1955/56;* see also: *Statistiek van de Sociale Omstandigheden der Studenten, Studiejaar 1947/48*.

TABLE 31

Father's occupation	No. of students
Higher group:	
(H.1) Higher administrative and technical personnel in government, etc.	1 870
(H.2) Military officers, higher police officers	413
(H.3) Judges, lawyers, notaries, accountants, etc.	943
(H.4) Teachers in higher and secondary education institutions	1 738
(H.5) Ministers of religion	506
(H.6) Physicians, dentists, veterinarians, pharmacists	1 898
(H.7) Independent engineers, architects, artists; leaders of social institutions, museums, etc.	609
(H.8) Higher administrative and technical staff in commerce, industry, banking, shipping, etc.	4 039
Total in 'H' group	12 016
Middle group	
(M.1) Middle level administrative and technical staff (other than government)	2 379
(M.2) Middle level government, railway, military and police officers	1 841
(M.3) Elementary and advanced elementary school teachers	1 753
(M.4) Independent farmers	1 302
(M.5) Small businessmen, shopkeepers, agents, travelling salesmen, etc.	4 402
Total in 'M' group	11 677
Lower group	
(L.1) Lower level administrative staff (other than government)	330
(L.2) Lower level government, railway, military and police staff	414
(L.3) Industrial and farm workers	1 083
Total in 'L' group	1 827
Unknown and other	467
TOTAL	25 985

Yugoslavia[1] publishes tables showing the distribution of students by university and faculty and by category of parent as shown in Table 32. The numbers of students relate to 1956/57.

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[1] Institut Fédéral de Statistique, *Enseignement Supérieur, 1956/57.*

TABLE 32

Category of parent		No. of students
(1) Farmers	Independent farmers	17 622
	Members of peasants' co-operatives	664
(2) Workers	Active workers	6 259
	Retired workers	1 758
(3) Government employees	Active	25 220
	Retired	8 415
(4) Artisans	Independent artisans	4 218
	Members of artisans' co-operatives	630
(5) Liberal professions		1 492
(6) Others		4 467
(7) Unknown		1 107
TOTAL		71 852

Other examples could be mentioned of statistics relating to social origin of students published in different countries.[1] Some of these are out of date, and others based on small samples taken from one or a few institutions.

As to the tabulation of students by nationality, most countries where large numbers of foreign students are enrolled usually give their numbers by nationality, permanent residence or country of origin. In the United States of America, which has the largest number of foreign students, statistics on this subject are compiled and published annually by a non-governmental organization.[2] In the academic year 1956/57 in the United States, 40,666 foreign students coming from 136 nations and political areas of the world were reported. Detailed tables are given showing the distribution of foreign students by home country, sex, year in which their studies began in the United States, financial support, academic status (undergraduate, graduate, or special student), and fields of major interest. Table 33 shows the distribution by field of major interest.

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[1] See, for example: University of London, Institute of Education, 'Comparative Study of Social Origin of Students in the Universities', in *The Year Book of Education, 1950*; Japan, Ministry of Education, *Economic Conditions of University Students, 1954* (in Japanese); 'La Universidad de Chile en 1957' (*Boletin Estadistico de la Universidad de Chile*, año 1957, Nos 2 y 3); J. Tena Artigas, 'Los Estudiantes de Madrid' (*Revista de Educación*, Nos 12 y 3, 1953); Switzerland, Federal Bureau of Statistics, *Die Studierenden an Schweizerischen Hochschulen*, 1936, 1946.

[2] Institute of International Education, *Open Doors, 1957: a Report on International Exchange.*

TABLE 33

Field of major interest	No. of foreign students	Fields of major interest	No. of foreign students
1. Agriculture	1 469	7. Physical and natural sciences:	
2. Business administration	3 485	(a) Biological sciences	1 450
3. Education	1 982	(b) Chemistry	1 788
4. Engineering:		(c) Geo-sciences	697
(a) Chemical	1 555	(d) Mathematics	550
(b) Civil	1 915	(e) Physics	887
(c) Electrical	1 666	8. Social sciences:	
(d) Industrial	268	(a) Economics	1 529
(e) Mechanical	2 526	(b) History	387
(f) Other	1 127	(c) Home economics	560
5. Humanities:		(d) International relations	454
(a) Architecture	546	(e) Law	446
(b) Creative arts	1 538	(f) Political science	653
(c) Languages and literature	1 976	(g) Psychology	474
(d) Liberal arts	1 729	(h) Public administration	302
(e) Theology	2 304	(i) Social work	323
(f) Other	431	(j) Sociology	547
6. Medical sciences:		(k) Other	184
(a) Dentistry	357	9. All other	675
(b) Medicine	1 087	10. No answer	389
(c) Nursing	802		
(d) Pharmacy	321		
(e) Pre-medicine	813		
(f) Other	474	TOTAL	40 666

In France,[1] university students are classified by nationality in three categories as shown in Table 34 (numbers as at 30 June 1957).

TABLE 34

Nationality	No. of students	
	Male	Female
French students from metropolitan France	94 065	59 143
Students from overseas territories (including the associated states of Cambodia, Laos, and Viet-nam and the former protectorates of Morocco and Tunisia)	6 661	1 557
Foreign students	6 109	2 488
TOTAL	106 835	63 188

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[1] Bureau Universitaire de Statistique, *Statistique de l'Enseignement Supérieur Public, 1956-57*.

In the United Kingdom,[1] full-time students in universities and university colleges are classified by home residence, in four categories as shown in Table 35, the figures given relating to the academic year 1956/57.

TABLE 35

Home residence	No. of students
Home residence within 30 miles	30 447
Other parts of United Kingdom	49 512
Outside United Kingdom but within British Commonwealth	6 115
Foreign countries	3 792
TOTAL	89 866

However, in some countries, such as Yugoslavia, the term 'nationality' is used to describe the ethnic group within the country to which Yugoslav students belong (e.g., Serbs, Croats, Slovenes, Macedonians, Montenegrans, Shiptars, Bulgars, Hungarians, etc.), foreign students being classified separately by country of origin.

Another aspect of the question of foreign students is shown by the tabulation, in some countries, of national students studying abroad on government scholarships or otherwise. For example, 9,887 United States citizens were reported, in 1956/57, as studying abroad at 387 institutions in 54 countries.[2] In Japan,[3] the number of Japanese students who went abroad to study in the school year 1957 is reported at 257, of whom 62 were studying abroad at their own expense, and 195 with foreign government or non-government scholarships. The same report also shows 50 foreign students from 16 countries invited to Japan to study in universities with Japanese government scholarships.

The Republic of China[4] reported that 479 students went abroad in 1957 to 9 different countries to study; the numbers classified by field of study, were as shown in Table 36.

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[1] University Grants Committee, *Returns from Universities and University Colleges in receipt of Treasury Grant, 1956-1957.*

[2] Institute of International Education, *Open Doors, 1957: a Report on International Exchange.*

[3] Ministry of Education, *Education in 1957.*

[4] *Statistical Abstract of the Republic of China, 1958.*

TABLE 36

Field of study	No. of students	Field of study	No. of students
Humanities	88	Engineering	175
Education	10	Medical science	1
Fine arts	6	Agriculture	50
Law	16	Other	12
Social sciences	74		
Natural sciences	47	TOTAL	479

Iraq[1] reported a total of 2,520 Iraqi students studying abroad, in 1957/58, classified as shown in Table 37.

TABLE 37

Financial status	No. of students
At the expense of the Ministry of Education	338
Grant-aided by the Ministry of Education	467
At the expense of the Development Board	124
Grant-aided by the Development Board	18
Private students (i.e., at own expense)	1 573
TOTAL	2 520

Turkey[2] reported 2,950 students studying abroad as of January 1957, classified as shown in Table 38.

TABLE 38

Status	No. of students
Government-sponsored students	134
Students with foreign currency permits	2 175
Students without foreign currency permits	641
TOTAL	2 950

While statistics on the number of students studying abroad are useful from the viewpoint of international educational exchange and for the assessment of the availability of highly qualified manpower in each country, they should obviously be presented separately and not included in the total student enrolment of the country in question. Otherwise there would be double counting of these students, both by the country in which they are studying and by the country from which they come.

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[1] *Education in Iraq, 1957-1958* (report presented to the Twenty-first International Conference on Public Education, Geneva, 1958).

[2] *Educational Activities in the 1956-57 School Year in Turkey* (report presented to the Twentieth International Conference on Public Education, Geneva, 1957).

Finally, one of the most useful elements in statistics of higher education is the number of students each year who complete their studies leading to a degree or diploma. In France,[1] statistics are published on the examinations passed and diplomas awarded in each group of university faculties (see Table 39).

TABLE 39

Diplomas awarded in the faculties of law, 1957

Certificat de capacité	1 072
Licence en droit	2 952
Doctorat d'Etat:	
en droit	176
ès sciences économiques	48
Diplômes universitaires:	
Doctorat	69
Certificat d'aptitude à l'administration des entreprises	69
Certificat d'études administratives et financières	102
Certificat de sciences pénales et de criminologie	124
Autres diplômes	227
Certificat d'aptitude à la profession d'avocat	257
TOTAL	5 096

Diplomas awarded in the science faculties, 1957

Certificat d'études physiques, chimiques et biologiques	3 997
Licence d'enseignement:	
Sciences mathématiques	368
Sciences physiques	463
Sciences naturelles	564
Licence libre (toutes spécialités)	1 057
Doctorat d'Etat:	
Sciences mathématiques	19
Sciences physiques	128
Sciences naturelles	91
Titre d'Ingénieur-Docteur	60
Diplômes universitaires:	
Doctorat	68
Ingénieur-chimiste	130
Autres diplômes	176
TOTAL	7 121

Similar tables are given for the faculties of letters, medicine, pharmacy, and theology.

In India,[2] statistics are published on examination results in all universities, classified according to degree, diploma or certificate, by university and by faculty. Table 40 gives a summary of the degrees granted in 1953/54, by faculty.

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[1] Bureau Universitaire de Statistique, *Statistiques des Examens et Diplômes de l'Enseignement Supérieur, 1957.*

[2] Ministry of Education and Scientific Research, *Education in Universities in India, 1952-54.*

TABLE 40

Faculty	No. of degrees granted	
	Bachelor	Master
Arts	36 375	7 889
Science	14 382	2 146
Oriental learning	50	—
Agriculture	910	151
Commerce	6 612	876
Education (teacher training)	4 567	263
Engineering and technology	3 071	128
Home arts and home science	49	—
Law	5 909	26
Library science	—	2
Medicine	2 710	127
Social work	—	77
Theology	2	—
Music	5	—
Veterinary science	256	1
TOTAL	74 898	11 686

In addition, there were 250 students who received doctorate degrees, 114,139 who passed intermediate examinations, and 13,935 who qualified for the various diplomas and certificates.

In Italy,[1] statistics are published annually on the number of degrees and diplomas awarded, classified by university, by faculty and by field of study. A separate table gives the number of foreign students receiving degrees and diplomas, classified by university, by faculty, and by country of origin.

The distribution of degrees and diplomas awarded in 1955/56, by faculty, was as shown in Table 41.

TABLE 41

Faculty	Degrees awarded	Faculty	Degrees awarded
Mathematical, physical and natural sciences	2 580	Economics and commerce	1 773
Pharmacy	1 811	Political science	175
Medicine and surgery	3 504	Law	4 795
Engineering	2 238	Letters and philosophy	2 558
Architecture	298	Education	1 166
Agriculture	530	Other faculties and institutions	322
Veterinary medicine	337		
		TOTAL	22 087

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[1] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana, 1958.*

A set of special tables on degrees and diplomas awarded in 1954/55 give further details of the graduates classified by sex and age, civil status and home residence; by economic activity, social status and occupation of father; by type of diploma presented at matriculation; by regularity of studies at the secondary school and university levels; by scholastic achievement in university courses; and by financial aid received during their secondary school and university studies.

In Japan,[1] graduates from junior colleges and universities are classified by sex, by employment, and by occupation. Table 42 shows the distribution of university graduates of 1956, by employment as of July 1957.

TABLE 42

Employment as of July 1957	1956 graduates	
	Total	Female
Graduates continuing as students	5 411	784
Graduates employed	86 924	9 230
Graduates employed and attending schools	421	29
Interns	3 082	256
Unemployed	9 504	4 666
Others	8 280	1 215
TOTAL	113 622	16 180

The distribution of employed graduates, by type of occupation, is given in Table 43.

TABLE 43

Type of occupation	Employed graduates	
	Total	Female
Agriculture	460	7
Forestry and hunting	194	2
Fishery and marine products industry	178	8
Mining	962	13
Construction	2 924	30
Manufacturing	26 727	1 147
Wholesale and retail	12 063	425
Finance and insurance	6 649	166
Realty dealing	341	3
Transport, communications and other public works	5 661	260
Service occupations	23 255	6 636
Public service	4 852	220
Others	3 079	342
TOTAL	87 345	9 259

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[1] Ministry of Education, *Education in 1957*.

In the United Kingdom,[1] annual statistics on degrees and diplomas obtained are published, classified by university, and by faculties and schools, distinguishing between first degrees (honours, ordinary) and higher degrees; and between first diplomas and higher diplomas. A separate table gives the main subjects in which honours degrees were obtained. Table 44 gives a summary of the numbers of degrees and diplomas obtained in the academic year 1956/57.

TABLE 44

Field of study	First degrees		Higher degrees	Diplomas	
Arts	8 073		950	3 712	
Pure science	4 473		1 143	363	
Medicine	1 955		207	1 519	
Dentistry	266		3	309	
Technology	2 191		390	1 141	
Agriculture and forestry	389		77	93	
Veterinary science	128		5	30	
Totals:	(Honours)	(Ordinary)		(First)	Higher)
Men	8 597	4 426	2 478	1 942	3 057
Women	2 930	1 522	297	656	1 512
GRAND TOTALS	17 475		2 775	7 167	

In the United States of America,[2] statistics are published biennially on the number of earned degrees conferred, by level, by field of study, and by sex of recipient. A summary of earned degrees by major fields of study, for 1953/54, is shown in Table 45.

In the Union of Soviet Socialist Republics,[3] the number of graduates from higher educational establishments (including correspondence courses), have been published for various years and periods since 1928, according to type of establishment. The figures for 1955 are as shown in Table 46.

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1. University Grants Committee, *Returns from Universities and University Colleges in receipt of Treasury Grant, 1956-1957*.
2. Office of Education, *Statistics of Higher Education: Faculty, Students and Degrees, 1953-54*.
3. Central Statistical Board, *Cultural Progress in the USSR: Statistical Returns*.

TABLE 45

Field of study	No. of earned degrees conferred		
	Bachelor's and first professional	Master's and second professional	Doctor's
Agriculture	7 832	1 302	515
Biological sciences	9 366	1 610	1 077
Education	56 817	27 785	1 498
Engineering	22 329	4 204	594
English	12 566	1 674	356
Fine arts	15 894	3 027	249
Foreign languages	3 793	820	230
Geography	708	177	51
Healing arts and medical sciences	23 616	1 552	202
Home economics	7 467	590	25
Journalism	2 244	242	6
Law (LL. B. or higher)	9 298	341	31
Library science	1 596	127	7
Mathematics	4 090	706	227
Military or naval science	1 843	—	—
Physical sciences	9 880	2 374	1 686
Philosophy	1 845	251	103
Psychology	5 758	1 254	619
Religion	7 435	1 310	226
Social sciences	76 365	7 182	1 195
Miscellaneous (without major)	12 138	295	99
Totals, all fields	292.880	56 823	8 996

TABLE 46

Type of educational establishment	No. of graduates		
	Day students	Evening students	Correspondence students
Industry and construction	50 996	2 235	3 215
Transport and communication	8 769	331	365
Agriculture	23 005	45	1 086
Economics and law	8 419	692	6 534
Education	69 423	1 267	50 146
Public health, physical culture and sports	16 286	—	539
Arts and film industry	2 331	33	129
TOTAL	179 229	4 603	62 014

In another table, graduates are classified according to field of specialization, with comparative data for 1950 and 1955 (see Table 47).

TABLE 47

Field of specialization	No. of graduates	
	1950	1955
Geology and prospecting of mineral resources	1 721	3 976
Mining	1 353	5 290
Energetics	2 380	4 957
Metallurgy	1 416	2 656
Engineering and instrument making	9 101	15 736
Electrical machine-building and electrical instrument-making	1 433	2 981
Radio engineering and communication	1 427	2 950
Chemical technology	2 586	4 954
Timber industry, wood-processing, pulp and paper technology	727	1 885
Foodstuffs production	2 295	1 878
Consumer goods production	1 240	1 669
Construction	4 873	9 440
Geodesy and cartography	294	540
Hydrology and meteorology	379	628
Agriculture and forestry	12 859	24 563
Transport	3 059	4 236
Economics	10 103	16 138
Law	5 648	8 126
Public health and physical culture	20 747	16 943
Education: university level	12 323	15 560
Pedagogical and library institutes	78 529	98 249
Art	2 376	2 491
TOTAL	176 869	245 846

TEACHER EDUCATION

Statistics on teacher education are of special interest in relation to the supply of qualified teachers for the schools of a nation. Hence they should be tabulated separately from figures on general education and other forms of vocational education. Furthermore, where teacher education is provided at both the second and third levels of education, as is the case in many countries, it is more useful to have the statistics presented separately for each of these levels. Where appropriate, a further distinction should be made between schools and courses training teachers for the different levels of education (pre-primary, primary and secondary).

One of the major problems concerning statistics of teacher training arises from the fact that many types of teachers, especially teachers at the secondary level, are trained in institutions which are either not designated as teacher training institutions or are such that the statistics on teacher training are not easily separated from those relating to other types of training. Thus, universities and other institutions of higher education, where many teachers actually receive their training, may not be in a position to present separate statistics on the number of students receiving training for the teaching profession, nor on the number of professors responsible for such training. Where teacher training colleges or departments, at the university level, are organized separately, with distinct student bodies and teaching staff, the problem is merely one of avoiding double-counting. This can be done by including such colleges and departments under the heading of teacher education, and excluding them statistically from the category of higher education in general. However, where teacher training functions are assumed by institutions and departments which also have functions of general education and other types of professional education, the solution is not easy. In such cases, the most practical solution may be simply to state, by means of explanatory notes, that teacher training is also given in certain specified institutions and departments, but that separate figures on students and teaching staff are not available.

Another difficulty sometimes occurs where teacher training courses begin at the secondary level and continue at the level of higher education. Thus it would be possible to present separate figures on students receiving training for the teaching profession, but it would be difficult or impossible to separate the enrolment according to level of education. In such cases, the most feasible solution would be to give enrolment figures on teacher training covering both the second and third levels of education, accompanied by appropriate notes explaining the situation.

A further difficulty may be due to the fact that certain teacher training courses are not designed specifically for the training of teachers at a particular level. For example, the same course may be taken by prospective teachers of pre-primary and of primary schools, or of primary and post-primary schools. In such cases, of course, the distinction between levels of education for which the student-teachers are being trained cannot be maintained.

Finally, there may be various types of teacher training not given in regular training schools or departments, e.g., 'emergency' training courses of short duration, supplementary training of teachers-in-service, etc. It would seem advisable, for international reporting, not to include such courses or programmes under regular teacher education, but simply to mention them, with the appropriate figures, in explanatory notes.

We shall now take a few examples of national statistics on teacher education, showing various methods of presentation. In Brazil,[1] statistics on teacher training at the second level of education are published annually, giving the number of courses, the number of teachers, and the number of students and graduates in two cycles: (1) for the training of *regentes de ensino* (assistant teachers in primary schools); and (2) for the training of *professôres* (primary school teachers). The figures for 1958 are as reproduced in Table 48.

In addition, according to a separate report on higher education,[2] there

TABLE 48

	first cycle (training of *regentes do ensino*)	second cycle (training of *professôres*)
Number of courses	291	817
Number of teachers:		
Men	615	3 231
Women	1 763	5 846
Total	2 378	9 077
Number of students enrolled at beginning of school year:		
First-year students	7 685	22 116
Second-year students	4 633	18 993
Third-year students	3 442	16 549
Fourth-year students	3 223	753
Fifth-year students	463	—
Total	19 446	58 411
Number of students who completed their course (in 1957):		
Men	369	1 520
Women	2 458	15 042
Total	2 827	16 562

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[1] Ministerio da Educaçao e Cultura, *Sinopse Estatistica do Ensino Médio, 1958.*

[2] Ministerio da Educaçâo e Cultura, *Sinopse Estatistica do Ensino Superior, 1957.*

were 1,991 students (in 1957) receiving training as secondary school teachers, besides 2,224 students enrolled in pedagogy and 693 in physical education courses.

In Germany,[1] where all teacher training is carried on at the third level of education, semi-annual statistics are compiled on the number of teacher training institutions, number of students by sex and age and by type of training, and number of students who pass examinations for teaching certificates. Table 49 shows the number of students enrolled for the winter semester of 1957/58.

TABLE 49

Type of training	No. of students	
	Total	Female
Primary school teacher training	14 314	9 233
Vocational trades teacher training	1 576	278
Agricultural and horticultural teacher training	126	2
Teacher training in agricultural home economics and in household gardening	229	229
Teacher training for agricultural or horticultural part-time vocational schools	141	87
Teacher training in home economics vocational schools	310	310
Technical teacher training	1 038	996
Teacher training for special schools for handicapped children	177	63
TOTAL	17 911	11 198

Table 50 shows the number of those who passed examinations in the winter semester of 1956/57 and the summer semester of 1957, according to type of examination.

TABLE 50

Type of examination	No. of passes	
	Winter semester 1956/57	Summer semester 1957
Primary school teaching	2 792	2 208
Vocational trades teaching	255	299
Agricultural and horticultural teaching	128	2
Agricultural home economics teaching	54	89
Agricultural and horticultural vocational school teaching	101	—
Home economics vocational school teaching	57	60
Other types of teaching posts	130	446
TOTAL	3 517	3 104

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[1] Statistisches Bundesamt, *Die lehrerbildenen Anstalten und Einrichtungen im Winterhalbjahr 1957/58*.

In Italy,[1] where teacher training institutions are classified under higher secondary education, statistics are compiled annually on the number of institutions by legal status, number of administrative and teaching staff, number of students by sex and by year of study, number of repeaters (*ripetenti*) by year of study, number of students studying foreign languages, and results of examinations. The number of students enrolled, and number of repeaters, in 1956/57 by sex and by year of study, are shown in Table 51.

TABLE 51

Year of study	No. of students			
	Enrolled		Repeaters	
	Total	Female	Total	Female
First year	28 827	25 022	2 902	2 359
Second year	26 959	23 486	3 555	2 909
Third year	25 217	21 813	1 928	1 493
Fourth year	28 101	23 701	4 150	3 340
TOTAL	109 104	94 022	12 535	10 101

The results of examinations in 1955/56 may be summarized as shown in Table 52.

TABLE 52

Type of examination	No. of passes	
	Internal candidates	External candidates
Promotion and admission to second year	21 915	788
Promotion and admission to third year	22 144	727
Promotion and admission to fourth year	21 879	1 029
Awarded teacher's certificate	19 760	2 460

In Mexico,[2] statistics on teacher training at the secondary school level are compiled annually, giving the number of schools (for men, for women, and mixed), by method of support (Federal, State, private, and mixed), their teaching staff, students enrolled at the beginning of the year, those remaining at the end of the year, those who sat for examinations, those who passed and those who failed. The figures for students relating to 1956 are shown in Table 53.

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[1] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana, 1958*.

[2] Dirección General de Estadística, *Compendio Estadístico, 1956-1957*.

TABLE 53

	No. of students	
	Male	Female
Enrolled at beginning of year	13 859	21 286
Dropped out during year	1 077	1 386
Remaining at end of year	12 782	19 900
Sat for examinations	12 576	19 726
Passed examinations	11 461	18 290
Failed examinations	1 115	1 436

Portugal,[1] in its annual statistics on teacher education, gives the number of applicants for admission to teacher training courses, the number admitted, the total number of students enrolled in the various courses, those who completed the courses, and those who passed their certificate examinations, The courses are: (a) for primary school teachers; (b) for secondary school teachers—general and vocational; (c) for physical education; and (d) for special education (exceptional children). Table 54 shows the figures for 1956/57.

TABLE 54

	No. of students	
	Total	Female
Applicants for admission	1 776	1 528
Admitted by examination	1 277	1 129
Total students enrolled	2 777	2 378
Completed their courses:		
Primary school teaching	1 388	1 229
Secondary school teaching (general)	21	13
Secondary school teaching (vocational)	8	—
Physical education	10	5
Special education	8	7
Sat for certificate examinations	1 315	1 286
Passed certificate examinations	552	547

In the United Kingdom (England and Wales),[2] statistics are presented each year on the training of teachers in university departments of education and permanent training colleges, covering students admitted to various courses of training, students who completed courses of training (passes and failures), students taking supplementary courses for qualified teachers, as well as information on special courses for experienced serving teachers, and on short courses for serving teachers organized by the Ministry of Education and by Local Education Authorities. Table 55 gives a summary of the information for 1958/59.

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[1] Instituto Nacional de Estatística, *Estatística da Educação, Ano Lectivo 1956-1957.*
[2] Ministry of Education, *Education in 1958.*

TABLE 55

Type of training	No. of students	
	Total	Women
Students admitted to courses of training (1958/59)		
Post-graduate or equivalent	3 112	1 320
Two-year courses	12 751	9 235
One-year art courses	417	232
Other one-year courses	303	150
Technical subjects	447	79
Domestic subjects (housecraft)	819	819
Physical education	342	342
TOTAL	18 191	12 177
Students who completed courses of training (passes, 1957/58)		
Post-graduate or equivalent	2 782	1 170
Two-year courses	10 507	8 006
One-year art courses	392	209
Other one-year courses	217	110
Technical subjects	346	85
Domestic subjects (housecraft)	694	694
Physical education	293	293
TOTAL	15 231	10 567
Supplementary courses for qualified teachers	1 743	576
Special courses for experienced serving teachers	219	91

In addition, there were 3,613 teachers in service who attended 75 short courses organized by the Ministry of Education, in subjects of the main school curriculum (history, geography, etc.), technical subjects, arts and crafts, domestic subjects, and also in educational and vocational guidance, special educational treatment, etc.

SPECIAL EDUCATION

Where special schools and classes are established for the education of exceptional children, it is usually not difficult to have statistical tables giving the basic elements of information concerning the number of such schools or classes, the number of teachers and number of pupils. The classification of special schools and classes by the type of children for whom they are intended varies with each country, though the main categories of physically handicapped children—the blind, the deaf, the crippled, etc.—are usually included. Less often mentioned are the mentally handicapped or socially maladjusted categories. In few countries are there provisions for exceptional children who are gifted or mentally advanced. The principal problem in statistical tabulations on this subject arises sometimes from the difficulty of separating the special schools from regular schools, or pupils in special classes from the rest of the primary and secondary school pupils. A second difficulty may arise from the fact that certain social institutions—such as orphanages, children's hospitals, reformatory schools, etc., may or may not be considered as schools or educational institutions in the formal sense, hence they may or may not be included in the official statistics on education. The wide variations in methods of tabulating statistics on special education may be shown by the following examples taken from national publications.

In Austria,[1] statistics on special schools are regularly published giving the number of schools, number of classes, number of teachers, and number of pupils, by sex and by grade. Figures for 1956/57, by category of handicapped pupils, are shown in Table 56.

TABLE 56

Category of pupils	Schools	Classes	Pupils
Mentally deficient	78	564	9 266
Sight impaired	2	18	284
Blind	2	9	54
Speech defective	1	19	205
Hard of hearing	1	9	122
Deaf-mutes	6	73	819
Physically handicapped	8	80	1 215
Behavioural difficulties	15	108	1 789
Total	113	880	13 754
Special classes included with regular primary and upper primary schools	—	278	4 561
GRAND TOTAL	113	1 158	18 315

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[1] Bundesministerium für Unterricht, *Österreichische Schulstatistik, 1956/57.*

Table 57 shows their distribution by sex and by grade.

TABLE 57

Grade	Boys	Girls	Total
1	1 567	1 115	2 682
2	1 741	1 154	2 895
3	1 804	1 194	2 998
4	1 680	1 073	2 753
5	1 529	971	2 500
6	1 315	813	2 128
7	961	594	1 555
8	386	264	650
9	65	89	154
TOTAL	11 048	7 267	18 315

The number of teachers was distributed by sex and by qualification as shown in Table 58.

TABLE 58

Qualification	No. of teachers	
	Total	Women
Certificate for upper primary school teaching	39	18
Certificate for special school teaching	532	279
Certificate for primary school teaching	446	324
Secondary school graduation	30	21
No formal qualification	5	4
TOTAL	1 052	646

In India,[1] statistics on special education are compiled annually showing the number of institutions by type of special education and by type of management, number of specially trained and other teachers, and number of pupils enrolled (with maximum pupil capacity shown for each type of institution), together with expenditure for special education by source of funds and number and total value of scholarships, free studentships and other financial concessions. The total number of institutions for special education of handicapped children reported for 1955/56 was 90 for boys and 4 for girls. The 90 institutions for boys included 23 managed by Government, 2 by local boards, and 65 by private bodies. All 4 of the institutions for girls were managed by private bodies. A total of 484 men teachers and 191 women teachers included 302 specially trained teachers and 123 specially trained women teachers. Table 59 shows the enrolment and maximum capacity of the different types of institutions.

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[1] Ministry of Education and Scientific Research, *Education in India, 1955-56.*

TABLE 59

Type of institution	No. of institutions	Boys	Girls	nmMaxim capacity
		Enrolment		
For the mentally handicapped	3	158	69	325
For the physically handicapped:				
For the blind	49	1 901	344	2 978
For the deaf-mute	34	1 560	730	2 704
For the crippled	8	457	95	1 045
TOTAL	94	4 076	1 238	7 052

In addition, there were 6,206 pupils reported in reformatories for boys and 983 in reformatories for girls.

In Japan,[1] the number of pupils in special schools is tabulated by grade, separately for public and private schools, and by category of handicap of the pupils. The figures as of 1 May 1957 are shown in Table 60.

TABLE 60

Level of education	Enrolment		
	In schools for the blind	In schools for the deaf	In schools for the otherwise handicapped
Pre-primary	9	454	32
Primary:			
Grade 1	523	2 148	135
Grade 2	439	2 049	171
Grade 3	418	1 959	225
Grade 4	496	1 941	201
Grade 5	497	1 769	159
Grade 6	570	1 846	146
Lower secondary:			
Grade 1	768	1 966	187
Grade 2	833	1 829	186
Grade 3	881	1 634	163
Upper secondary:			
Regular course	2 053	2 195	73
Advanced course	1 101	221	22
Special course	1 276	33	1
TOTAL	9 864	20 044	1 701

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[1] Ministry of Education, *Education in 1957*.

In the Netherlands,[1] statistics on special education are compiled periodically, giving the number of schools, teachers, and pupils, by type of special education. The figures for 1958 are shown in Table 61.

TABLE 61

Category	Schools	Teachers	Pupils
Mentally deficient	284	2 108	34 643
Deaf-mutes	11	164	1 354
Partially deaf	9	90	1 135
Blind and partially blind	8	64	638
Physically defective	8	45	543
Tubercular children	17	88	993
Sickly children	18	82	1 566
Epileptic children	2	22	347
Problem children	21	101	1 317
Children under public guardianship	17	90	1 683
Children in pedagogical institutes	3	28	283
Children having other difficulties	29	187	2 545
Children of migrant workers living in boats	26	162	.
Children living in caravans	14	72	.
TOTAL	467	3 303	47 047

The pupils are further classified by sex and age, by previous schooling and by their destination after leaving the special schools. The teachers are classified by sex and age, and by type of certificate or qualification. Special subject teachers are further classified by their fields of teaching (physical exercise, handicrafts, speech training, manual work, religion, etc.).

In the United Kingdom (England and Wales),[2] fairly extensive statistics on special schools for handicapped children are published covering hospital schools and other special schools maintained and non-maintained by Local Education Authorities. They show the number of schools, teachers and pupils by category of handicapped pupils catered for. The number of teachers is given in separate categories for full-time and part-time teachers, the latter category being also converted into full-time equivalents. The pupils are distributed by sex and by age, and by category of handicap. Classes are analysed by size and by category of pupil; and schools are classified by type, showing the number of schools with day pupils only and those with boarders. The figures for January 1958,

[1] Central Bureau of Statistics, *Statistics of Special Elementary Education, 1955-1958*.

[2] Ministry of Education, *Education in 1958*.

relating to 114 hospital schools and 674 other special schools, are summarized in Table 62.

TABLE 62

	Hospital schools	Other special schools
Schools	114	674
Pupils		
Boys	3 102	33 330
Girls	2 535	23 158
Total	5 637	56 488
Full-time teachers		
Men	75	1 844
Women	487	2 497
Total	562	4 341
Part-time teachers	33	378
(Full-time equivalent)	(11.2)	(124.9)

The numbers of schools, teachers, and pupils in the 674 special schools other than hospital schools, by category of handicapped pupils catered for, were distributed as shown in Table 63.

TABLE 63

Category of pupils	Schools	Full-time Teachers	Pupils
Blind	21	145	1 184
Partially sighted	24	138	1 534
Blind and partially sighted	2	24	218
Deaf	14	139	1 024
Partially deaf	4	45	428
Deaf and partially deaf	32	430	3 445
Physically handicapped	76	383	4 897
Delicate	91	441	7 801
Delicate and physically handicapped	51	296	4 931
Delicate and maladjusted	4	26	248
Educationally subnormal	308	2 051	28 601
Epileptic	6	46	723
Maladjusted	40	174	1 410
Speech defect	1	3	44
TOTAL	674	4 341	56 488

In the United States of America,[1] statistics on special education for exceptional children have been collected at approximately five-year intervals since 1900. The most recent data available relate to 1952/53, and are restricted to public day school classes, not including the extensive programmes carried on in residential schools, and on behalf of the home-bound, hospitalized, and socially maladjusted children. The figures, based on reports from 1,785 places in 48 States and the District of Columbia, are summarized in Table 64.

TABLE 64

Type of exceptional child	Pupils		Teachers	
	Elementary	Secondary	Full-time	Part-time
Educable mentally retarded	80 363	28 540	6 411	300
Speech-defective	254 179	52 568	2 011	245
Crippled	15 924	1 889	1 378	120
Hard-of-hearing	9 680	2 252	400	80
Partially seeing	6 544	1 470	621	26
Special health problems	10 166	1 289	788	80
Severely mentally retarded	4 515	147	320	36
Deaf	3 446	489	451	28
Blind	658	181	89	6
Mentally gifted	3 683	19 233	722	204
TOTAL	389 158	108 058	13 191	1 125

It is stated that the classification by type of exceptional child in the 1952/53 report differs from that used in previous reports in two ways. The former category 'mentally deficient' is divided into two categories—'educable mentally retarded' and 'severely mentally retarded'. It is suggested that the first category would apply to children whose I.Q.s (intelligence quotients) would probably be in the 50 to 75 range, while the second category would apply to those whose I.Q.s are below 50. On the other hand, the previous classifications of 'epileptic' and 'delicate' children is replaced by a single category of 'special health problems'. It is indicated that this is in accordance with modern terminology, and is meant to include children handicapped by tubercular, epileptic, cardiac, and other debilitating conditions. An additional category—'truant, delinquent, or maladjusted'—was included in the questionnaire used for the 1952/53 survey, but it was dropped from the tabulation when it was found that the reports had included information on such children covering not only special classes but also visiting teacher (social work) services.

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[1] Office of Education, *Statistics of Special Education for Exceptional Children, 1952-53.*

It is perhaps worth noting that, according to the Office of Education, about 10 per cent of the United States school population are in need of special educational services of the types included in this survey. The total enrolment in special schools and classes actually reported in 1952/53 was only about 18 per cent of those in need of special services.

ADULT EDUCATION

The above tabulations do not always cover all the types of educational activities in a country. Hence it is necessary to provide, in international reports, for additional data dealing with other types of education. By their very nature, these statistics will not be comparable from one country to another, but they are mainly useful for rounding out the educational picture of each particular country as presented in the form of statistics. One of the more usual types of education to be considered here is adult education, which may take various forms and go under various names in different countries. Statistics on adult education, even for the same country, may show wide variations from year to year, for such reasons as the emphasis on literacy campaigns in some countries, and the passage of certain legislative acts in others. Or the variations may be due simply to changes in the method of counting adopted by the educational and statistical authorities. It is thus advisable to give reasonably full explanations, wherever possible, to accompany national statistics on adult education, so that the reader may have a better understanding of the figures presented in national or international tables. We shall now give a few examples of national tabulations of statistics relating to adult education.

In Denmark,[1] adult education is provided in folk high schools, evening schools and other types of schools and courses. Statistics are published annually regarding the number of folk high schools, etc., the number of students by sex and by age groups (under 16, 16-18, 18-25, 25 years and over) by occupation of the parents, whether the students have attended similar schools previously, the number of students receiving government support, and the total amount of government support given. Similar but less detailed information is given on the evening schools and other types of schools and courses. Enrolment figures for 1955/56 are summarized in Table 65.

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[1] Statistical Department, *Statistical Yearbook, 1959*.

TABLE 65

Type of school, course, etc.	Schools	Classes	Students
Folk high schools	56	. . .	6 061
Agricultural schools	28	. . .	2 650
Domestic science schools	33	. . .	2 506
Private post-primary schools	91	. . .	6 150
Evening schools	5 006	19 616	328 317
(in the capital)	(21)	(2 372)	(46 454)
(in provincial towns)	(412)	(8 895)	(157 379)
(in rural districts)	(4 573)	(8 349)	(124 484)
Agricultural courses	202	202	5 784
Schools for juveniles	238	677	12 238
Total number of students			363 706

The total number of students in these schools and courses increased about 25 per cent in five years, as shown by the following comparison: 290,359 students in 1950/51; 306,512 in 1951/52; 330,887 in 1952/53; 329,351 in 1953/54; 339,455 in 1954/55; and 363,706 in 1955/56.

In India,[1] statistics of social (adult) education are compiled on the number of schools, by management (central government, district boards, municipal boards, private bodies), number of literacy centres or classes, number of adults on rolls, number of adults made literate, number of teachers, specially trained or otherwise, and expenditure from different sources. Table 66 gives a summary of enrolment data for 1955/56.

TABLE 66

	For men	For women	For both
Schools	502	31	138
Literacy centres or classes	35 959	4 485	4 976
	Men		Women
Adults on rolls:			
In schools	19 092		1 971
In literacy centres/classes	1 123 834		133 930
Adults made literate:			
During previous years	5 043 654		544 674
During current year	491 234		53 987
Teachers:			
Specially trained (honorary)	10 849		1 067
,, ,, (paid)	1 551		296
Others (honorary)	24 518		2 134
,, (paid)	3 329		415

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[1] Ministry of Education and Scientific Research, *Education in India, 1955/56.*

A comparison of the enrolment over the period 1950-55 is as follows: 1,256,011 adults enrolled in 1950/51; 1,061,280 in 1951/52; 1,088,784 in 1952/53; 948,847 in 1953/54; 1,111,405 in 1954/55; and 1,278,827 in 1955/56.

In Indonesia,[1] statistics are published on mass education, including the anti-illiteracy campaign, general education courses, adult education courses, youth community centres, and people's libraries. The data concerning the anti-illiteracy campaign for the period 1952-55 are given in Table 67.

TABLE 67

Date	Courses	Teachers	Pupil	No. who passed examination since beginning of campaign
End of 1952	83 082	77 777	2 694 031	2 115 378
,, ,, 1953	71 260	67 563	2 440 434	3 607 677
,, ,, 1954	57 757	52 495	2 346 776	5 256 388
,, ,, 1955	49 414	47 087	1 612 324	6 816 292

TABLE 68

Type of course	Courses	Teachers	Pupils
General courses:			
Grade A	455	2 760	11 558
Grade B	64	371	1 503
Grade C	8	16	96
Adult education courses	1 465	5 333	44 462
	1 992	8 480	57 619

TABLE 69

Date	Total no. of pupils	
	General courses A, B, & C	Adult education courses
End of 1952	38 464	13 921
,, ,, 1953	26 845	43 251
,, ,, 1954	23 348	47 186
,, ,, 1955	13 157	44 462

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1. Ministry of Education, Instruction and Culture, *Development of Education in Indonesia 1956.*

Enrolment figures for general education courses and adult education courses at the end of 1955 are summarized in Table 68.

Comparative pupil enrolments for 1955 and previous years are shown in Table 69.

In Italy,[1] annual statistics were previously published on 'popular' schools, distinguishing courses for illiterate adults, for semi-literate adults, and for adults who wished to improve their cultural level. Figures for 1953-56 show a substantial decrease after 1953/54 (see Table 70).

TABLE 70

Year	Enrolment in popular schools: Total	Female
1953/54	563 057	157 436
1954/55	303 013	79 998
1955/56	274 318	79 363
1956/57	299 347	103 617

Meanwhile, another series of figures are published on technical and vocational courses for workers, which show a rapid increase in enrolment between 1953 and 1956 (see Table 71).

TABLE 71

Year	Enrolment in technical and vocational courses for workers: Total	Female
1953/54	158 264	58 208
1954/55	227 614	88 738
1955/56	216 970	86 352
1956/57	337 673	136 824

The data for 1956/57 are classified by type and duration of course, and by sex and age level of pupils. The number of courses, number of teachers, and number of pupils, by type and duration of course, are shown in Table 72.

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[1] Istituto Centrale di Statistica, *Annuario Statistico dell'Istruzione Italiana*, 1955, 1956, 1957, 1958.

TABLE 72

Type or duration of course	Courses	Teachers	Pupils
Type			
Industrial	2 381	3 418	91 410
Arts and crafts	3 371	4 014	90 393
Agricultural	2 298	2 730	63 443
Commercial	2 360	3 215	90 709
Merchant marine	58	108	1 718
TOTAL	10 468	13 485	337 673
Duration of course			
Less than 1 month	1 079		37 662
1-3 months	1 449		40 374
3-6 months	3 345		91 811
Over 6 months	4 595		167 826
TOTAL	10 468		337 673

The number of pupils by age level is given in two classes, as shown in Table 73.

TABLE 73

Age level	No. of pupils		
	Male	Female	Total
Up to 18 years	107 974	78 210	186 184
Over 18 years	92 875	58 614	151 489
TOTAL	200 849	136 824	337 673

In the United Kingdom (England and Wales),[1] statistics on adult education are compiled annually showing the number of courses and number of students, classified according to the body responsible for the courses, the subject and the type of course. Figures for 1957/58 are given in Table 74.

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[1] Ministry of Education, *Education in 1958*.

TABLE 74

Subject and type of course	No. of courses	Registered students	
		Men	Women
By responsible body			
Universities	4 147	41 340	45 983
Workers Educational Association	3 513	29 542	34 703
Others	281	3 345	4 698
By type of course			
Tutorial classes	817	5 634	6 843
Sessional courses	1 740	13 235	15 930
Terminal courses	2 074	15 285	19 129
Other courses	2 944	34 077	38 699
Training courses	15	289	126
Residential courses	351	5 707	4 657
By subject			
History	1 196	9 456	13 036
International affairs	486	4 555	4 692
Current affairs	637	6 674	5 269
Social science	1 184	15 140	9 785
Philosophy	215	1 927	1 617
Psychology	272	1 739	2 947
Religion	423	3 627	4 814
Physical sciences	400	5 663	2 964
Biological sciences	326	2 949	3 250
Geography	155	1 255	1 751
English literature	775	4 628	9 861
Foreign literature	65	304	635
The arts	1 190	8 400	16 356
Welsh life, culture and literature	122	1 287	1 103
Miscellaneous	495	6 623	7 304
TOTAL	7 941	74 227	85 384

Compared with previous years, the 1957/58 data show a small decline both in number of courses and number of students, following steady increases up to 1956/57 (see Table 75).

TABLE 75

Year	Adult education	
	Courses	Students
1953/54	7 190	137 203
1954/55	7 448	147 782
1955/56	7 915	158 509
1956/57	8 104	165 035
1957/58	7 941	159 611

However, in the United Kingdom, adult education thus reported constitutes only a small part of an extensive system of 'further education', which covers both full-time and part-time education for persons over compulsory school age, and leisure-time occupation for such persons in such organized cultural training and recreation activities as are suited to their requirements. Recent developments tend to emphasize the importance of full-time and part-time courses given in technical colleges with the cooperation of industrial concerns, in order to increase the output of scientific and technical personnel.

Summary figures on further education, by type of establishment and by full-time or part-time, day or evening students, for 1957/58, are shown in Table 76.

TABLE 76

Type of student	No. of establishments	Male	Female
		No. of students	
Full-time students:			
Major establishments (other than art)	378	44 972	31 904
Art establishments	150	6 482	6 898
Part-time students:			
Major establishments (other than art)	491	362 832	87 013
Art establishments	177	16 880	18 594
Evening students:			
Major establishments (other than art)	476	590 544	306 005
Art establishments	181	48 132	50 871
Evening institutes	8 299	367 342	609 993
TOTAL (less duplication)	9 036	1 197 338	1 076 439

These students are further classified by age (see Table 77).

TABLE 77

Age	Full-time students	Part-time day students	Evening students
Under 15	4 875	12 909	118 367
15	19 122	65 373	171 308
16	14 954	85 434	167 675
17	10 640	84 188	158 641
18	8 437	58 377	124 841
19	6 514	42 895	94 682
20	5 315	29 169	73 248
21 and over	20 399	106 974	1 064 125
TOTAL	90 256	485 319	1 972 887

The number of teachers in full-time service are shown by type of establishment, and by grade and sex of teacher. The data on teachers by grade and sex, as at 31 March 1958, are summarized in Table 78.

TABLE 78

Grade of teacher	Men	Women
Principal	552	68
Vice-principal (head of department)	77	2
Vice-principal (not head of department)	48	9
Head of department (not also vice-principal)	1 033	112
Reader	12	2
Senior lecturer	1 032	35
Lecturer	2 794	214
Assistant, grade B	5 470	982
Assistant, grade A	2 115	812
TOTAL	13 133	2 236

Further detailed tables are given on the number of classes, class entries, and student hours, by type of establishment and by subject of study. Such data concerning, for example, evening classes in major establishments, art establishments, and evening institutes, which are given on 10 printed pages, may be summarized by subject groups, as shown in Table 79.

TABLE 79

Subject group	Classes	Class entries	Student hours (000's)
A. *General subjects*			
Group I. English	11 362	251 372	5 848
Group II. Languages other than English	6 126	112 732	3 044
Group III. Social sciences	3 269	65 455	1 575
Group IV. Mental and moral sciences	191	3 646	94
Group V. Mathematics and natural sciences	23 887	456 124	15 422
Group VI. Art	4 967	102 579	3 171
Group VII. Handicrafts and other recreational subjects	18 385	329 323	9 658
Group VIII. Music, elocution and theatre	5 172	108 551	3 459
Group IX. Physical culture	12 881	334 925	7 549
Group X. First aid and hygiene	804	16 921	307
Group XI. General courses	544	10 865	256
B. *Subjects related to commerce and industry*			
Group I. Agriculture	597	8 634	153
Group II. Nautical occupations	84	2 007	45
Group III. Mining and quarrying	783	15 699	554
Group IV. Building and allied occupations	11 316	158 537	6 037
Group V. Manufacturing industries	21 709	358 711	14 506
Group VI. Book printing and allied occupations	2 748	43 095	1 570
Group VII. Commercial and professional occupations	22 451	466 749	11 887
Group VIII. Personal services	737	11 876	472
C. *Domestic and women's subjects*			
Group I. Needlecraft	21 586	344 569	10 448
Group II. Child care and nursing	182	3 087	44
Group III. Other subjects	6 135	103 251	2 820
D. *Miscellaneous subjects*			
Group I. Tutorial classes and individual study (undefined)	26	370	9
Group II. Informal and recreational activities	685	26 427	1 302
TOTAL	176 627	3 335 505	100 228

In the Union of Soviet Socialist Republics,[1] statistics are published on the number of students in evening schools for workers, for young peasants, and for adults, according to three grade levels, as shown in Table 80. (figures are for 1955/56).

TABLE 80

Type of school and grade	No. of schools	No. of students
Evening schools for young workers	6 637	1 387 100
In grades 1-4	.	(54 000)
In grades 5-7	.	(533 900)
In grades 8-10 (11)	.	(799 200)
Evening schools for young peasants	10 772	345 400
In grades 1-4	.	(44 100)
In grades 5-7	.	(277 800)
In grades 8-10	.	(23 500)
Evening schools for adults	343	120 500
In grades 1-4	.	(4 700)
In grades 5-7	.	(32 200)
In grades 8-10 (11)	.	(83 600)
TOTAL	17 752	1 853 000

Compared with previous years, total enrolment in evening schools for young workers and for adults show slight decreases in 1955/56, after steady increases up to 1954/55. In the case of evening schools for young peasants, the trend has been downward since 1950/51 (see Table 81).

TABLE 81

Year	Enrolment in evening schools (thousands)		
	For young workers	For young peasants	For adults
1950/51	838.3	511.7	87.9
1951/52	1 001.8	481.1	101.8
1952/53	1 126.3	455.2	108.7
1953/54	1 352.9	479.2	117.1
1954/55	1 416.6	395.8	120.6
1955/56	1 387.1	345.4	120.5

POPULATION AND OTHER GENERAL TABLES

Besides the basic tables on schools, teachers and pupils, by level and type of education, as discussed above, certain additional tables are needed to help in the analysis of statistics on school enrolment. First among these is a table on the total school-age population. The sources of such data are usually found in the national census bureaux or central statistical offices. The age range of the school-age population may vary according to the laws and customs of each country, but in general, the population 5-24 years of age may be considered appropriate for international reporting. Ideally, the population figures in this range should be given by single years of age for each sex. Where this is not possible, especially as regards current estimates (as distinguished from census data), the information may be given for five-year age groups, namely: 5-9, 10-14, 15-19, and 20-24 years. In addition, with respect to countries where compulsory education is enforced, it is useful, and perhaps essential, to know the size of the compulsory school-age population, determined in accordance with the laws and definitions of the country in question. Furthermore, it may be possible, and it is certainly useful, to have figures on the projection of the school-age population,[1] or compulsory school-age population, for a period of 5, 10, 15 or 20 years, as a quantitative basis for nation-wide educational planning.

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[1] Central Statistical Board, *Cultural Progress in the USSR: Statistical Returns*, Moscow, 1958.

Census statistics on population by age are now available for the majority of countries where national population censuses have been taken at more or less regular intervals. Current official estimates of the population by sex and age are becoming increasingly available through national and international publications.[2] Methods of estimating population are also improving with the development of the science of demography.[3]

Ideally, if current population estimates and school enrolment statistics are available both by sex and by single years of age, it is useful to tabulate such data side by side to show the number and proportion of boys and

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1. See, for example, E. G. Jacoby, *Methods of School Enrolment Projection*, Unesco, 1959 (*Educational Studies and Documents*, No. 32).
2. For internationally compiled tables on population by sex and age, based on latest population censuses or official estimates, see United Nations. *Demographic Yearbook* (annually since 1948); national tables are usually published in census reports and in statistical yearbooks and bulletins.
3. A series of manuels on methods of estimating population are published by the United Nations, under the following titles: Manual I, *Methods of Estimating Total Population for Current Dates* (*Population Studies*, No. 10); Manual II, *Methods of Appraisal of Quality of Basic Data for Population Estimates* (*Population Studies*, No. 23); Manual III, *Methods for Population Projections by Sex and Age* (*Population Studies*, No. 25). Future population estimates for individual countries, covering five-year intervals between 1950 and 1980, have been prepared by the United Nations Population Branch and published in another series of reports: Report I, *The Population of Central America (including Mexico), 1950-1980* (*Population Studies*, No. 16); Report II, *The Population of South America, 1950-1980* (*Population Studies*, No. 21); Report III, *The Population of South-East Asia (including Ceylon and China: Taiwan), 1950-1980* (*Population Studies*, No. 30).

TABLE 82. *Population and school enrolment by sex and age (Metropolitan France), as at 1 January 1958 (in thousands)*

Age in years	Population estimated at 1.1.1958	Pupils enrolled in				Total pupils enrolled	As per cent of population
		Pre-primary classes	Primary classes	Secondary classes	Higher education		
				A. BOYS			
3,4,5	1 189	663.3	77.3	–	–	740.6	62.3
6	395	–	392.3	–	–	392.3	99.3
7	416	–	412.7	–	–	412.7	99.2
8	421	–	417.2	–	–	417.2	99.1
9	419	–	414.8	–	–	414.8	99.0
10	416	–	393.3	18.5	–	411.8	99.0
11	403	–	302.2	94.8	–	397.0	98.5
12	304	–	194.0	103.9	–	297.9	98.0
13	294	–	184.1	103.0	–	287.1	97.7
14	296	–	38.1	149.1	–	187.2	63.2
15	275	–	3.7	122.5	–	126.2	45.9
16	247	–	0.9	95.2	–	96.1	38.9
17	263	–	0.4	62.1	2.3	64.8	24.6
18	289	–	0.7	34.8	7.7	43.2	14.9
19	293	–	–	16.6	13.0	29.6	10.1
20-24	1 571	–	–	9.2	62.7	71.9	4.6
25-29	1 678	–	–	–	16.0	16.0	1.0
30 and over	...	–	–	–	5.2	5.2	...
				B. GIRLS			
3,4,5	1 142	644.5	93.4	–	–	737.9	64.6
6	384	–	381.6	–	–	381.6	99.4
7	401	–	399.1	–	–	399.1	99.5
8	406	–	403.1	–	–	403.1	99.3
9	404	–	401.5	0.2	–	401.7	99.4
10	403	–	382.9	17.0	–	399.9	99.2
11	389	–	292.3	92.3	–	384.6	98.9
12	291	–	183.4	104.4	–	287.8	98.9
13	284	–	177.1	103.3	–	280.4	98.7
14	284	–	35.6	159.7	–	195.3	68.8
15	263	–	5.9	134.6	–	140.5	53.4
16	240	–	2.3	103.1	–	105.4	43.9
17	254	–	1.2	63.9	1.7	66.8	26.3
18	281	–	1.3	34.3	5.2	40.8	14.5
19	282	–	–	14.0	8.5	22.5	8.0
20-24	1 468	–	–	6.8	34.0	40.8	2.8
25-29	1 578	–	–	–	10.5	10.5	0.7
30 and over	...	–	–	–	2.8	2.8	...

girls at each age who are enrolled in each type of school. For example, France[1] shows the distribution of the population by sex and age, and school enrolment by type of school; these figures are given in Table 82 as at 1 January 1958 (table condensed by combining schools at the same level of education).

In Japan,[2] similar data are published in tabular and graphic form, relating to the population up to 25 years of age. Since the enrolment data were available only by sex and grade, the age distribution had to be estimated on the basis of normal progression of pupils through the

TABLE 83. *Total population and population enrolled in schools by sex and age (Japan, 1957)*

Age	Total population (thousands)		Population enrolled in schools (thousands)	
	Male	Female	Male	Female
3	873	829	9	9
4	930	885	71	65
5	993	948	261	248
6	1 104	1 058	1 095	1 051
7	1 216	1 166	1 213	1 164
8	1 249	1 200	1 247	1 199
9	1 284	1 230	1 282	1 229
10	1 006	962	1 004	961
11	715	693	714	692
12	897	871	896	870
13	1 002	975	1 001	974
14	960	933	959	932
15	1 013	988	582	469
16	1 006	979	513	415
17	888	876	451	353
18	779	770	208	67
19	840	836	134	42
20	881	871	111	15
21	892	881	118	14
22	851	849	5	0
23	826	826	5	0
24	833	835	1	0
25	824	827	1	0

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[1] Bureau Universitaire de Statistique, *Note sur la Répartition de la Population Scolaire, par Ages et Renseignements* (Annexe statistique au feuillet documentaire, No. 817, Nov.-Déc. 1958).

[2] Ministry of Education, *Education in Japan: Graphic Presentation, 1959.*

grades. The data referring to 1957 may be summarized by sex and age as shown in Table 83.

Where population and school enrolment figures are not available by single years of age, they may be tabulated for appropriate age groups, corresponding approximately to the school attendance ages at the different levels of education. For example, in Puerto Rico,[1] where primary, lower secondary, and upper secondary schools are provided for children aged 6-12, 13-15, 16-18 years respectively, the number of children enrolled in school in these age groups and these numbers expressed as percentages of the population are given for 1955/56 in Table 84.

TABLE 84

Age group	Population	Enrolment	Enrolment as per cent of population
6-12 years	426 292	397 191	93.17
13-15 years	163 479	123 746	75.70
16-18 years	144 330	55 832	38.68
TOTAL	734 101	576 769	78.57

In recent years, the percentage of the population 6-18 years old enrolled in school has shown a steady increase (see Table 85).

TABLE 85

Year	Population 6-18 years old	School enrolment	Per cent
1950/51	705 256	454 866	64.50
1951/52	712 297	470 448	66.05
1952/53	719 339	504 046	70.07
1953/54	726 380	534 950	73.65
1954/55	752 531	559 798	74.39
1955/56	734 101	576 769	78.57

In countries where compulsory education is in force, it is useful to have separate figures on the size of the compulsory school-age population, and the number attending school. For example, in Finland,[2] annual tables are given on the compulsory school-age population, 7-15 years old, and the figures relating to 1957 are as follows:

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[1] Bureau of Economics and Statistics, *Statistical Yearbook, 1957.*
[2] Central Statistical Office, *Statistical Yearbook of Finland, 1958.*

Number of children. (boys 7-15 years old: 396,961; girls, 7-15 years old: 379,110)	776,071
Children who have completed school	21,160
Children receiving education (in primary school: 631,009; in secondary school: 110,320; in other schools: 10,021)	751,350
Children not receiving education	3,561
Those who have failed to comply with compulsory education statutes	(344)

Finally, projections of future population by sex and age, such as are carried out in various countries, can give useful data on the estimated school-age population for future years. One example may be cited from New Zealand,[1] providing projections of future population, by sex and quinquennial age groups, at five-year intervals between 1960 and 1980. Table 86 gives figures for the age groups under 25 years (assuming a net gain from migration of 5,000 per annum in the total population).

TABLE 86. *Projection of future population under 25 years of age (New Zealand, 1960-80)*

Sex and age group	1960	1965	1970	1975	1980
Male					
0-4	140 950	150 850	171 650	200 050	228 400
5-9	129 950	140 600	150 400	171 000	199 150
10-14	119 150	130 450	141 050	150 800	171 350
15-19	93 500	119 350	130 600	141 150	150 850
20-24	77 100	94 450	120 100	131 250	141 700
Female					
0-4	135 000	144 500	164 400	191 600	218 750
5-9	123 700	134 900	144 300	164 100	191 100
10-14	114 450	124 250	135 400	144 800	164 500
15-19	89 450	114 750	124 500	135 450	145 000
20-24	74 300	90 000	115 200	124 900	135 800

Tables showing the distribution of pupils enrolled by grade, sex and age can serve many useful purposes. The figures should relate particularly to all primary and secondary schools, both public and private, either separately or suitably combined. Examples of such tables may be found in various national publications, and in the Unesco *World Survey of Education*. As an illustration, we reproduce in Table 87, the age, sex and grade distribution of pupils enrolled in primary schools of Panama,[2] the data listed referring to all pupils present on 31 July 1954.

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[1] Department of Statistics, *Population Projections, 1955-80* (supplement to June 1958 issue of *Monthly Abstract of Statistics*).

[2] Unesco, *World Survey of Education*, Vol. II, *Primary Education*, p. 828.

TABLE 87. *Age, sex and grade distribution of pupils enrolled in public primary schools (Panama, 1954)* [1]

Age	Sex	Pupils by grade 1	2	3	4	5	6	Total
5	M.	9	–	–	–	–	–	9
	F.	8	–	–	–	–	–	8
6	M.	758	17	–	–	–	–	775
	F.	718	36	–	–	–	–	754
7	M.	7 697	1 025	13	–	–	–	8 735
	F.	7 483	1 161	23	1	–	–	8 668
8	M.	3 020	5 758	1 190	17	–	–	9 985
	F.	2 628	5 890	856	29	–	–	9 403
9	M.	1 382	4 224	3 075	570	24	–	9 275
	F.	1 203	3 830	3 563	648	17	–	9 261
10	M.	888	2 853	2 367	2 832	1 103	13	10 056
	F.	670	2 156	2 370	3 173	526	34	8 929
11	M.	434	1 609	1 546	2 642	1 890	447	8 568
	F.	308	1 175	1 446	2 563	2 161	542	8 195
12	M.	318	1 073	1 053	1 995	1 464	1 438	7 341
	F.	196	723	864	1 745	1 669	1 614	6 811
13	M.	168	575	665	1 396	1 064	1 371	5 239
	F.	80	400	469	1 074	1 049	1 407	4 479
14	M.	70	381	422	880	845	1 219	3 817
	F.	55	196	234	568	718	1 145	2 916
15+	M.	58	205	234	546	728	1 472	3 243
	F.	15	67	139	285	425	1 049	1 980
TOTAL	M.	14 802	17 720	10 565	10 878	7 118	5 960	67 043
	F.	13 364	15 634	9 964	10 086	6 565	5 791	61 404
	MF.	*28 166*	*33 354*	*20 529*	*20 964*	*13 683*	*11 751*	*128 447*
Median age	M.	*7.9*	*9.5*	*10.4*	*11.8*	*12.4*	*13.8*	.
	F.	*7.8*	*9.2*	*10.2*	*11.5*	*12.3*	*13.5*	.
	MF.	*7.8*	*9.3*	*10.3*	*11.6*	*12.4*	*13.6*	.
Normal age for grade		(7)	(8)	(9)	(10)	(11)	(12)	.
Percentage of pupils 2 years or more above normal age		*21*	*34*	*34*	*40*	*35*	*42*	*33*

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[1] Data refer to all pupils present on 31 July 1954.

Where it is not possible to classify pupils completely by age, sex and grade, tables may be prepared, for each level and type of education, giving the distribution of pupils either by age and sex, or by grade and sex. They may also be given by age and grade, without classification by sex. If part-time education is important, pupils should also be classified by age or grade, and by full-time or part-time school attendance. This last aspect may be illustrated by an example from Belgium,[1] where pupils in full-time and in part-time education are tabulated separately at each level, by age, sex, and other classifications. The data for 1956/57 may be summarized as in Table 88.

TABLE 88. *Pupils in full-time and part-time education, by sex, level of education, and age (Belgium, 1956/57)*

Level of education and age of pupils	Full-time education		Part-time education	
	Male	Female	Male	Female
Level of education				
Pre-primary	179 070	173 671	–	–
Primary	445 152	420 776	–	–
Lower secondary	166 744	157 719	68 747	41 288
Upper secondary	48 968	37 498	9 450	3 954
Higher	31 939	13 065	–	–
TOTAL	871 873	802 729	78 197	45 242
Age of pupils				
Under 6 years	183 438	176 910	–	–
6-13	529 739	508 061	1 714	2 284
14-16	86 413	77 482	22 404	16 090
17-19	46 285	31 451	21 130	13 537
20-23	19 967	7 672	14 813	6 755
24 and over	6 031	1 153	18 136	6 576

Statistics of class size, usually only for primary schools but sometimes also for secondary schools, are compiled and published from time to time in some countries. Where such statistics are available, they are more directly useful than figures on average pupil-teacher ratios for determining the requirements of additional classrooms and teachers. The most useful form of tabulation is a set of frequency tables, for each level of education and type of school, showing the number of classes of given sizes and the number of pupils situated in classes of given sizes. For example, in the Netherlands,[2] the data on class size in elementary and continued elementary schools, for 1957, are given as in Table 89.

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[1] Ministère de l'Instruction Publique, *Annuaire Statistique de l'Enseignement, 1956/57.*

[2] Central Bureau of Statistics, *Statistics of Elementary and Continued Elementary Education, 1953-1957.*

TABLE 89. *Number of classes and pupils, by type of school and by class size (Netherlands, 1957)*

Type of school	Size of class (pupils)	No. of classes	No. of pupils
(a) Schools for elementary education (excluding sections for continued elementary education)	1-4	1	4
	5-9	42	333
	10-14	241	3 037
	15-19	885	15 439
	20-24	2 669	59 448
	25-29	5 354	145 845
	30-34	8 227	264 159
	35-39	9 753	360 784
	40-44	8 545	357 807
	45-49	4 493	209 196
	50-54	910	46 570
	55-59	109	6 089
	60 or more	13	856
TOTAL		41 242	1 469 567
(b) Sections for continued elementary education	1-4	–	–
	5-9	3	26
	10-14	44	556
	15-19	152	2 615
	20-24	193	4 245
	25-29	111	2 959
	30-34	49	1 551
	35-39	16	590
	40-44	4	165
	45 or more	1	50
TOTAL		573	12 757
(c) Schools for continued elementary education	1-4	–	–
	5-9	9	71
	10-14	36	460
	15-19	125	2 174
	20-24	293	6 517
	25-29	295	7 948
	30-34	228	7 178
	35-39	69	2 511
	40-44	16	655
	45-49	10	478
	50 or more	4	206
TOTAL		1 085	28 198

From these data may be derived the average class size for each type of school. Compared with previous years, the average class size for elementary school classes had declined somewhat more noticeably than for the continued elementary schools and sections (see Table 90).

TABLE 90

Year	Average class size		
	In elementary schools	In continued elementary sections	In continued elementary schools
1953	35.6	22.9	25.7
1954	36.1	22.4	25.5
1955	35.8	22.2	24.6
1956	35.7	21.6	24.5
1957	35.4	22.3	25.6

OTHER TYPES OF TABLES

Besides the subjects discussed above, there are many other types of tables dealing with educational institutions and programmes which are, or could be, of international interest. For example, on the subject of school buildings and facilities, periodic inventories might be taken of the number and characteristics of school buildings, classrooms, laboratories, libraries, playgrounds, etc., and data compiled on the use of the various facilities provided by the schools for the pupils, teachers and the local community. A large group of statistical compilations is connected with the subject of health and nutrition of schoolchildren referring, for example, to physical measurements, dental and medical examinations of pupils, records of absences due to illness, operation of school feeding programmes, etc. Another important field of school statistics concerns scholastic achievement in the different subjects of the curriculum, based on objective tests and measurements. Still another concerns the employment of school leavers and graduates, especially after completion of secondary, vocational, and higher education. The increasing use of audio-visual aids in education, including films and filmstrips, radio and television, constitutes another fruitful area for the establishment of comparable statistics. Many types of statistics could also be compiled relating to the living conditions, extra-curricular activities and employment of leisure time of resident and non-resident students in secondary schools and higher educational institutions. Suffice it to say that such statistics are actually prepared and published in many countries, and that steps could be taken to render them more useful for international comparisons. However, for the present it would be desirable to concentrate our efforts on improving the international comparability of those basic statistics relating to schools, teachers, and pupils that we have discussed in this chapter and in the other parts of the *Manual*. It is hoped that a minimum amount of agreement on definitions, classifications and tabulations of these statistics will be reached as a result of the application of the Recommendation concerning international standardization of statistics on these subjects. The area of international agreement could later be extended, and the degree of international comparability increased, once the educational and statistical authorities of the countries are convinced that their national needs and purposes are equally well or better served by international standardization.

PERIODICITY OF TABULATIONS

A word remains to be said about the most suitable frequency and periodicity of the various types of statistics relating to educational institutions. The majority of tables envisaged by the international Recommendation need to be compiled only once each year. A few tables, such as for example on the number of classes by size, need not be made more often than, say, once in five years. On the other hand, for national purposes it may be necessary to prepare certain tables more often than once a year, for example on the number of students enrolled at higher institutions each semester.

A more important consideration is the promptness and regularity of publication of these statistics once they are collected. With the accelerated development of education now taking place in many countries, it would be regrettable if the relevant statistics, which require a considerable amount of work to collect and compile, were to become out of date and hence of limited usefulness because of excessive delays in publication. This observation applies, of course, equally to the compilations made by Unesco and other international organizations, which must depend on the active co-operation of national statistical offices in supplying their data promptly to the organizations concerned, either in the form of publications or in returns to special questionnaires.

VIII. *Statistics of educational finance*

The financing of education

As one of the social services provided by governments and supported by the people, education is an enterprise of fundamental importance in all countries. The cost of this enterprise, whether borne entirely by the government or shared between the public and private sectors of the national economy, is substantial, amounting in some countries to as much as 5 or 6 per cent of the national income. In those countries with a federal form of government, where education is largely a responsibility of the constituent states, the share of the federal government in the financing of education may be relatively small, as for example in Canada, the Federal Republic of Germany, India, the United States of America, the Union of Soviet Socialist Republics, and Yugoslavia. Where education is wholly or mainly financed by the central government, the total cost may take up 20 per cent or more of the national budget, as for example in Cuba, Iran, and the Philippines. On the other hand, where municipal and other local authorities are largely responsible for the administration of schools, their share of the total cost of education may vary from about one-third or more, as for example, in the Netherlands and the United Kingdom, to about one-half or more, as for example in Japan, Norway and the United States.[1]

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[1] For a comparative study of the relative financial responsibilities for education borne by central, regional and local administrations in various countries, see Unesco/International Bureau of Education, *Financing of Education*, Paris/Geneva, 1955; for an analysis of public expenditure on education by different levels of government, see Unesco *Public Expenditure on Education* (ST/R/14), Paris, 1955.

Statistics of educational finance

Because of the different methods of financing education in various countries, and the different national systems of public finance accounting, it is most difficult to collect internationally comparable figures on educational finance. Annual reports of education ministries or departments, if they include budget or expenditure figures, give often a quite incomplete picture, since educational expenditures by other ministries and departments, local authorities, and autonomous institutions such as universities, etc., are usually not included. Ministry of finance reports may cover all central government expenditures, including grants, subsidies, etc. to local authorities and autonomous institutions, but would give no information on local expenditures derived from other than central government sources. As far as higher education is concerned, very few countries present consolidated reports on the total financing of higher educational institutions, particularly where these include both publicly and privately supported institutions. Only in recent years, with the development of methods of national income accounting, has it been possible for comprehensive studies to be made of the costs of education in certain countries.[1]

Meanwhile, a number of national reports have appeared on the financing of education in different countries, containing collections and analyses of official data on educational expenditures, sometimes with serious limitations as to scope and coverage, and more particularly from the viewpoint of methodology. For example, in Canada, a series of reports on this subject have been published by the Research Division of the Canadian Teachers' Federation, and by the School Finance Research Committee of the Canadian School Trustees' Association.[2] In Japan, the Ministry of Education has published, since 1951, a series of annual reports on local educational expenditures including expenditures by the central government but excluding expenditures for higher education.[3] In the Netherlands, the Central Bureau of Statistics publishes an annual report on the statistics of government expenditure on education, science and culture. Separate figures are given for the receipts and expenditures of the central government, the provinces, and the municipalities; for public and non-public schools, at each level of education; and for various headings under science and culture, such as libraries, museums, art galleries and archives, youth activities, physical training and sports, besides radio and television.[1]

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[1] See: F. Edding, *Internationale Tendenzen in der Entwicklung der Ausgaben für Schulen und Hochschulen* (International trends in educational expenditure), Kiel, 1958; J. Vaizey, *The Costs of Education* [in the United Kingdom], London, 1958; Institut National de la Statistique et des Etudes Economiques, *Coût et Développement de l'Enseignement en France* (*Etudes Economiques*, No. 3). Paris, 1958.

[2] Canadian Teachers' Federation, *Educational Finance in Canada*, Ottawa, 1953, 1954, 1958; Canadian School Trustees' Association, *School Finance in Canada*, Edmonton, 1955.

[3] Ministry of Education, *Local Educational Expenditures in Japan, 1949-50, 1950-51, 1951-52, 1952-53; Local Educational Expenditures during Recent Five Years, 1949/50-1953/54*. Tokyo, 1951-56; summaries of the annual surveys on educational expenditure for the most recent years are given in the Ministry's annual reports, *Education in Japan, 1955, 1956, 1957*. Tokyo, 1957-59.

In the United States of America, the Office of Education, in its *Biennial Survey of Education*, reports periodically on total current and capital expenditures for educational institutions at all levels, both publicly and privately controlled.[2] These reports are based on detailed statistics of state school systems[3] and of institutions of higher education,[4] published in separate parts of the survey. In addition, it compiles periodic reports on various types of educational expenditures by the Federal Government, either spent directly by the different federal government agencies or allotted to the states and territories under various specified programmes.[5] Special studies on the financing of public education at the primary and secondary levels have been published by the American Council on Education[6] and the United States Office of Education.[7] A comprehensive survey on the financing of higher education in the United States was undertaken by the Commission on Financing Higher Education, under the sponsorship of the Association of American Universities.[8]

Efforts to improve the comparability of national statistics on educational finance have been made in several countries. For instance in Canada, following a conference held in 1942 and attended by representatives of all the provincial Departments of Education and the Dominion Bureau of Statistics, a *Manual for School Secretary-Treasurers* was issued

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1. Central Bureau of Statistics, *Statistiek van de uitgaven der Overheid voor onderwijs, wetenschap en cultuur* (Statistics of the expenditure of the State, the provinces and the municipalities on education, science and culture), (annual), March 1959.
2. Office of Education, *Biennial Survey of Education, 1953-54*, Chapter 1, 'Statistical Summary of Education', Washington, 1957.
3. Office of Education, *Biennial Survey of Education, 1953-54*, Chapter 2, 'Statistics of State School Systems: Organization, Staff, Pupils, and Finances', Washington, 1956.
4. Office of Education, *Biennial Survey of Education, 1953-54*, Chapter 4, 'Statistics of higher education: Section II, Receipts, expenditures, and property', Washington, 1956.
5. Office of Education, *Federal Funds for Education, 1952-53 and 1953-54, 1954-55 and 1955-56, 1956-57 and 1957-58*. Washington, 1954, 1956, 1959.
6. American Council on Education, *Public School Expenditures in the United States*, Washington, 1944.
7. For example: *Expenditures for Education at the Midcentury*, and *Supplement*, Washington, 1953, 1954; *Trends in Significant Facts on School Finance, 1929-30 to 1953-54*. Washington, 1957.
8. Commission on Financing Higher Education, *Current Operating Expenditures and Income of Higher Education in the United States, 1930, 1940 and 1950*, New York, 1952.

by the Dominion Bureau of Statistics 'to assist [these officials] in completing financial statements'.[1] In the United States of America, the Office of Education issued in 1948 a circular on *Financial Accounting for Public Schools*, which was a revision of earlier bulletins on the subject.[2] Then, in 1957, with the co-operation of the American Association of School Administrators, the Association of School Business Officials of the United States and Canada, the Council of Chief State School Officers, the Department of Rural Education of the National Education Association, and the National School Boards Association, the Office of Education brought out a completely revised handbook entitled *Financial Accounting for Local and State School Systems: Standard Receipt and Expenditure Accounts*.[3]

Meanwhile, at the international level, the United Nations has recommended a standard system of national accounts, in which government and private expenditure for education and research is defined in the context of national accounting.[4] Furthermore, a *Manual for Economic and Functional Classification of Government Transactions* was issued by the United Nations, treating in greater detail the classification of central and local government expenditures under the head of 'education' among the social services.[5]

Basic concepts in educational accounts

Without entering into the complexities of public finance and accounting practices in the different countries, we shall merely take up here a few of the basic concepts relating to statistics of educational finance, particularly from the viewpoint of international reporting.[6]

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[1] Dominion Bureau of Statistics, *Manual for School Secretary-treasurers: to Assist in Completing Financial Statements*, Ottawa, 1944 (out of print).

[2] Office of Education, *Financial Accounting for Public Schools* (Circular 204, revised 1948), Washington, 1952.

[3] Office of Education, *Financial Accounting for Local and State School Systems: Standard Receipt and Expenditure Accounts*, Washington, 1957 (*State Educational Records and Reports Series*, Handbook II).

[4] United Nations Statistical Office, *A System of National Accounts and Supporting Tables*, New York, 1953 (in process of revision, January 1959), (*Studies in Methods*, Series F, No. 2).

[5] United Nations, Department of Economic and Social Affairs, *A Manual for Economic and Functional Classification of Government Transactions*, New York, 1958. (United Nations publication; sales number 1958, XVI, 2).

[6] For the following discussion, we have drawn largely from the United States Office of Education handbook, *Financial Accounting for Local and State School Systems*, and from the *Manual for School Secretary-Treasurers*, issued by the Dominion Bureau of Statistics Canada.

RECEIPTS

The two basic elements of accounting—receipts and expenditures—are well understood in principle, but need to be clarified in practice, since the comparability of the data depends on the interpretation of what items are included or excluded. To begin with, the term receipts is not synonymous with revenue, for part of the cash received may represent for example borrowed money, or payment of taxes from other years, or proceeds from sale of property, etc., which do not constitute current revenue. The usual sources of revenue receipts for educational authorities are: school taxes, government appropriations, subventions, tuition and other fees from patrons, earnings from school funds and endowments, rent derived from school property, gifts and bequests from private individuals or organizations, etc. The non-revenue receipts are those which either incur an obligation that must be met at some future date (for example, proceeds from loans or from sale of bonds), or change the form of an asset from property to cash and therefore decrease the amount and value of school property (that is, proceeds from sale of school property).

EXPENDITURES

Expenditures of educational authorities refer to all financial charges for goods and services, incurred by or on behalf of these authorities. In principle, they should refer only to those charges which are applicable to the current year's operations, and hence should not include payments for accounts owing from previous years, or payments made in advance for operations to be carried out at a later period. The total amount of expenditures may not always equal the total amount of receipts, the difference between the two constituting surplus or deficit.

RECURRING (OR CURRENT) EXPENDITURES

The main distinction to be made in educational expenditures is between recurring and capital expenditures. Expenditures for debt service should be recorded separately, and not included with either the recurring or the capital account.

Recurring expenditures are those payments for the purposes of administration or general control; for instruction, including salaries of teachers and other directly supportive professional staff, expenses for school libraries and audiovisual materials, teaching supplies, textbooks furnished free to pupils, etc.; for operation and maintenance of the school plant; for auxiliary services to pupils such as school attendance, health and transportation services; and for various fixed charges such as contributions to retirement or pension funds, social security, rent, insurance, etc. Other recurrent expenditures may be incurred in connexion with food services, residence halls, student-body activities, community services, scholarships and grants-in-aid for students, subsidies to private schools, etc.

CAPITAL EXPENDITURES (OR CAPITAL OUTLAY)

These result in the acquisition of fixed assets or additions to fixed assets. They include, for example, school sites, buildings, and equipment (as distinguished from supplies). They may be related directly to the administration and operation of schools, or to such non-educational facilities as residence halls, school canteens or cafeterias, bookstores, etc.

DEBT SERVICE (OR DEBT CHARGES)

These are current expenditures for the repayment of debt and for interest on debt incurred by the educational authorities. However, current loans payable in the same fiscal year in which the money was borrowed should not be included under debt service and the interest payments on such loans should be recorded as a fixed charge under recurring expenditures.

Recommended definitions

The following definitions are recommended for use in international reporting of statistics on educational finance:

> '*Receipts refer to cash received by or made available to or for schools, including appropriations, subventions, fees, cash value of property received as gifts, etc.*'
> '*Expenditures refer to financial charges incurred by or on behalf of schools for goods and services.*'
> '*Recurring expenditures include all expenditures except those for capital outlay and debt services.*'
> '*Capital expenditures refer to expenditures for land, buildings, equipment, etc.*'
> '*Debt service refers to the payment of interest and the repayment of the principal of loans.*'

Other useful concepts and definitions

In addition to the above basic items, there are some other useful concepts which need to be clarified in order to improve the comparability of data. The following discussion aims only to throw light on the actual practice followed in certain countries, and is not to be considered as part of the Unesco recommendation.

ACCOUNTING PERIOD

The accounting period of governments, sometimes called a fiscal year or financial year, is generally fixed by law, and may or may not coincide with the calendar year. Furthermore, it may be different again from the school year or academic year used in the reporting of statistics on educational institutions. Available information on the definitions of fiscal year and school year, based on recent surveys by the International Bureau of Education[1] and Unesco,[2] is given in Table 90. It should be noted that there may be variations within a country, especially regarding the definition of the school year. It is also possible that these definitions may have changed in some cases since the surveys were conducted. Nevertheless, one can get a fairly comprehensive view of the great variations existing in national practices in this regard.

From the statistical point of view, where the fiscal year does not coincide with the calendar year, it is advisable to indicate this fact clearly in statistical reports by using one of the following forms: 'fiscal year 1 July 1958-30 June 1959'; 'fiscal year ending 30 June 1959'; or 'fiscal year 1958-59'. The use of the form such as 'fiscal year 1959' is liable to be misleading to a person not thoroughly familiar with the laws and practices of the particular country and hence should be avoided whenever possible.

BUDGET ESTIMATES AND CLOSED ACCOUNTS

Ideally, all statistics of educational finance should be based on closed accounts, which usually give the completed transactions of cash receipts and payments relating to the particular fiscal year. However, the accounting may be on a cash basis, or may sometimes be on an accrual basis, in which latter case revenues are recorded when earned or when levies are made, and expenditures are recorded as soon as they result in liabilities, regardless of when the revenue is actually received or the payment is actually made. In practice, many governments are not able to publish or furnish closed accounts until long after the end of the fiscal year. Thus it may be necessary to use budget estimates in order to get some idea of the current situation regarding the financing of education. All budget estimates must therefore be considered as provisional and approximate, whether they are given as draft estimates submitted to legislatures, or as voted estimates or revised estimates approved by the legislature. In some cases, provisional results may be given, representing closed accounts subject to later adjustment or revision.[1]

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[1] *Financing of Education: a Comparative Study*, Paris/Geneva, 1955.

[2] *Public Expenditure on Education*, Part II (a), Paris, 1956; *World Survey of Education* Vol. II, *Primary Education*, Paris, 1958.

TABLE 91. *Definitions of fiscal year and school year in various countries*

Country	Fiscal year	School year
Afghanistan	21 Mar.-20 Mar.	5 Mar.-5 Dec. (temperate regions) 5 Dec.-5 June (warmer regions)
Argentina	1 Jan.-31 Dec.	11 Mar.-30 Nov. (most parts of country) 1 Oct.-31 Mar. (southern region)
Australia	1 July-30 June	Early Feb.-mid-Dec.
Austria	1 Jan.-31 Dec.	Early Sept.-early July
Belgium	1 Jan.-31 Dec.	Early Sept.-early July
Bulgaria	1 Jan.-31 Dec.	1 Sept.-early June
Burma	1 Oct.-30 Sept.	1 June-31 Mar.
Canada	1 Apr.-31 Mar.	Early Sept.-end June
Ceylon	Oct.-Sept.	Early Jan.-early Dec.
Chile	1 Jan.-31 Dec.	Early Mar.-mid-Dec.
Colombia	1 Jan.-31 Dec.	15 Mar.-22 Dec. (in capital) Early Oct.-end June (in provinces)
Czechoslovakia	1 Jan.-31 Dec.	1 Sept.-30 June
Dominican Republic	1 Jan.-31 Dec.	Mid-Sept.-mid-June
Ecuador	1 Jan.-31 Dec.	Early Oct.-July (in the Sierra) Apr.-Jan. (in coastal region)
El Salvador	1 Jan.-31 Dec.	1 Jan.-15 Nov.
France	1 Jan.-31 Dec.	1 Oct.-1 July
Germany: Federal Republic and West Berlin	1 Apr.-31 Mar.	1 Apr.-31 Mar. Sept.-mid-July (Bavaria)

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[1] For examples of these various types of accounts presented in an international report, see: United Nations, *Statistical Yearbook* (annual), table on 'Budget accounts and public debt'.

(Continued)

Country	Fiscal year	School year
Greece	1 July-30 June	10 Sept.-end June
Guatemala	1 July-30 June	May-Feb.
Haiti	1 Oct.-30 Sept.	Beginning Oct.-mid-July
Iceland	1 Jan.-31 Dec.	Sept.-May
India	1 Apr.-31 Mar.	Usually July-May
Indonesia	1 Jan.-31 Dec.	1 Aug.-31 July
Iran	21 Mar.-20 Mar.	End Sept.-early June
Ireland	1 Apr.-31 Mar.	Early Sept.-end June
Israel	1 Apr.-31 Mar.	Early Sept.-July
Italy	1 July-30 June	1 Sept.-end June
Japan	1 Apr.-31 Mar.	1 Apr.-31 Mar.
Jordan	1 Apr.-31 Mar.	Oct.-June
Lebanon	1 Jan.-31 Dec.	Early Oct.-end June
Liberia	1 Jan.-31 Dec.	1 Jan.-31 Dec.
Luxembourg	1 Jan.-31 Dec.	1 Sept.-late July
Mexico	1 Jan.-31 Dec.	Feb.-Nov. (in temperate zone) Sept.-June (in warm zone)
Netherlands	1 Jan.-31 Dec.	1 Sept.-31 Aug.
New Zealand	1 Apr.-31 Mar.	Early Feb.-end Nov.
Norway	1 July-30 June	End Aug.-end June
Panama	1 Jan.-31 Dec.	2 May-early Feb.
Philippines	1 July-30 June	15 June-30 Mar.
Portugal	1 Jan.-31 Dec.	1 Oct.-31 July
Rumania	1 Jan.-31 Dec.	15 Sept.-30 May
Turkey	1 Mar.-end Feb.	Usually beginning Oct.-end May
United Kingdom	1 Apr.-31 Mar.	Early Sept.-end July (England and Wales) End Aug.-end June (Scotland) 1 Aug.-31 July (N. Ireland)
United States of America	1 July-30 June	Usually Sept.-June
Venezuela	1 July-30 June	Mid-Sept.-July
Viet-Nam	1 Jan.-31 Dec.	Sept.-June

APPROPRIATION AND ALLOTMENT

A distinction is sometimes made between an appropriation, which is an authorization granted by a legislative body to make expenditures and to incur obligations for specific purposes, and an allotment which is an amount out of an appropriation, allotted for a certain period or purpose.

SUBVENTIONS OR GRANTS

These are contributions, either money or material goods, made by one government unit to another (as for example from the federal or central government to a state, provincial or local authority), and for which the contributing unit expects no repayment. They may also represent contributions from a government to private or independent bodies (such as, for example, private schools, religious organizations, universities).

SUPPLIES AND EQUIPMENT

It may sometimes be difficult to distinguish between supplies (which is a recurring expenditure) and equipment (which comes under capital expenditure). In general, the following criteria may be useful, as proposed by the United States Office of Education.[1]

'A *supply* item is any article or material which meets any *one* or more of the following conditions: (1) it is consumed in use; (2) it loses its original shape or appearance with use; (3) it is expendable, that is, if the article is damaged or some of its parts are lost or worn out, it is usually more feasible to replace it with an entirely new unit rather than repair it; (4) it is an inexpensive item, having characteristics of equipment, whose small unit cost makes it inadvisable to capitalize the item; (5) it loses its identity through incorporation into a different or more complex unit or substance.

'An *equipment* item is a movable or fixed unit of furniture or furnishings, an instrument, a machine, an apparatus, or a set of articles which meets *all* of the following conditions: (1) it retains its shape and appearance with use; (2) it is non-expendable, that is, if the article is damaged or some of its parts are lost or worn out, it is usually more feasible to repair it rather than replace it with an entirely new unit; (3) it represents an investment of money which makes it feasible and advisable to capitalize the item; (4) it does not lose its identity through incorporation into a different or more complex unit or substance.'

AUXILIARY SERVICES

These are services, not directly related to instruction, which are sometimes provided by educational authorities to pupils and to the community in which the school is situated. The auxiliary services to pupils may include, for example:

Attendance services, which have as their primary purpose the promotion and improvement of children's attendance at school, through enforcement of compulsory attendance laws and other means;

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[1] *Financial Accounting for Local and State School Systems*, chapter 11, p. 191.

School health services, consisting of medical, dental, psychiatric and nursing services in the nature of inspection, treatment, weighing, etc.;

Transportation services, which have as their purpose the conveyance of pupils either between home and school or on trips for educational activities;

Food services, which have as their purpose the preparation and serving of regular and incidental meals in connexion with school activities;

Student residences, which have as their purpose the housing, feeding, and otherwise caring for the physical needs or students in attendance at educational institutions;

Student-body activities, which are direct and personal services for pupils (such as inter-school athletics, entertainments, publications, clubs, band, orchestra, etc.) that are managed or operated by the student body under the guidance and direction of teachers, but are not part of the regular instructional programme.

The auxiliary services to the community may include, for example:

Community recreational activities, including community playgrounds, athletic clubs, community theatres, etc. for which the educational authority contributes part or all of the expenses;

Civic activities, such as parent-teachers' associations, public forums and lectures, and other civic-centre activities;

Public library services, where they are operated by the educational authority, either as a library for the general public, or as an extension of the school library especially for the benefit of the general public.

DIRECT AND INDIRECT EXPENSES

In the analysis of educational costs those elements which are easily identified with specific activities, such as teachers' salaries, are called direct expenses, and those elements which cannot be easily or accurately identified with specific activities, for example maintenance expenses, are called indirect expenses. Sometimes it is necessary, and may be feasible, to apportion certain expenditures to two or more different accounts in proportion to the benefits which these expenditures provide for the respective purposes for which the accounts were established.

Sources of receipts

In a 1955 survey covering 55 countries,[1] it was found that in about one-third of those countries, the responsibility for the financing of public education rests exclusively with the central administration; in another third of the countries the responsibility is divided, in various ways, between the central and local administrations (school districts or boards, municipalities, etc.); and in the remaining countries it is distributed among the central (or federal), regional (states, provinces, departments, etc.), and local administrations.

CENTRALLY FINANCED EDUCATIONAL SYSTEMS

Examples of countries where the financing of education rests exclusively with the central government:

In Afghanistan, in Cambodia, and in Iran, the Ministry of Education is responsible for all educational expenditures, distributed through the provincial or local administrations. In Chile and in Guatemala, the Ministry of Education is responsible for all financing except for school building which comes under the Ministry of Public Works. In Indonesia, primary education is financed by the Ministry of Home Affairs; secondary, vocational and higher education by the Ministry of Education. Other countries where all public expenditure on education is assumed by the central government include: Ceylon, Dominican Republic, El Salvador, Greece, Jordan, Liberia, Monaco, Portugal, Saudi Arabia, Thailand, United Arab Republic (region of Egypt and region of Syria).

EDUCATION FINANCED JOINTLY BY CENTRAL AND LOCAL AUTHORITIES

In the following countries, the financial responsibility is divided in various ways between the central and local administrations. For example, in Australia, the Federal Government is responsible for education in the Federal and Trust Territories, and the States for education at all levels within their territories. In Bulgaria and in Rumania, the central administration and the local 'people's councils' finance the schools placed under their respective jurisdictions. In Finland the State is responsible for all education except primary schools, which are maintained by the communes with the assistance of grants from the State. In Turkey the State bears the cost of all education above the primary school level, and also pays the salaries of primary school teachers; the local authorities pay for the building and operation of primary schools (with the assistance of State grants for rural school construction). In New Zealand the central government provides all the finance for public education, but the actual disbursement of a large proportion of the moneys is the responsibility of locally elected 'Education Boards', and governing bodies of post-primary schools and institutions of higher education. Municipalities have power to make grants for purposes of education from local rates but are not compelled to do so. In Ireland the State makes grants towards the cost of construction of primary schools, bears the entire cost of the teachers' salaries, and provides a first stock of school requisites; it also makes grants to secondary and vocational schools, to universities, and to recognized teacher-training colleges. Local authorities contribute towards the construction costs for primary schools, and towards the capital and recurring expenditures for vocational schools. Universities, which are autonomous institutions, derive their income mainly from parliamentary grants, endowments and fees. In Israel the State bears the whole cost of salaries for primary school teachers, and offers loans to local education authorities towards the erection of school buildings and limited grants for services such as gardening, handwork, and school lunches. As regards secondary education, mostly maintained by semi-public or private bodies, the State gives assistance only to the extent of grants per class and scholarships to deserving pupils. Institutions of higher education are financed partly by fees, partly by donations, and partly by government grants. Local authorities are mainly responsible for capital expenditure on primary schools and other expenses besides teachers' salaries. In the United Kingdom the central administrations (Ministries of Education for England and Wales and for Northern Ireland; Department of Education for Scotland) are responsible for the distribution of grants to local education authorities, and to certain schools, colleges and other educational institutions not maintained by local education authorities. Universities derive their income mainly from endowments and investments, tuition and boarding fees, and block grants made by the Treasury on the recommendation of the University Grants Committee. The local education authorities, besides receiving the grants from the central administrations, provide for the rest of the expenditure for education from the product of the local education tax.

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[1] Unesco/IBE, *Financing of Education*, Paris/Geneva, 1955.

According to a recent study on the financing of education in the United Kingdom, it was found that in 1955, the central government financed about 58 per cent, and local authorities about 36 per cent of total public educational expenditure, the remaining 6 per cent coming from fees and endowments.[1]

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[1] J. Vaizey, *The Costs of Education*, p. 49.

Other countries where the financing of education is the joint responsibility of central and local authorities include: Burma, Ecuador, Haiti, Honduras, Japan, Lebanon, Spain, Sweden, and Viet-Nam.

EDUCATION FINANCED JOINTLY BY CENTRAL, REGIONAL AND LOCAL AUTHORITIES

Among these countries are some with federal forms of government, where education is mainly a function of the federated states and their local authorities. There are others where the central government shares the responsibility for financing education with regional (provinces, departments, etc.) and local administrations. We shall give a few examples from each of these groups of countries.

In Brazil, for example, the Constitution lays down that the Federal Government, the governments of the federated states, and the municipal authorities are responsible for financing education, and that the Federal Government shall devote at least 10 per cent, and the states and municipalities at least 20 per cent of their tax revenue, for education. Of the total government expenditures for education in 1954, the respective shares of the federal, state and municipal authorities were approximately 38, 52 and 10 per cent.[1] In Canada, the administration of education is the exclusive right of the provinces, though the Federal Government may vote funds for the support of education and distribute them to the provincial governments. In each of the provinces except two, the financial responsibility is shared between the provincial department of education and the regional or local school boards. Funds distributed by the provincial department of education are in most cases obtained from the consolidated revenue of the province; the local and regional boards, in virtually all cases, secure their funds for educational purposes from taxes levied on real estate. Of the estimated total public expenditure on education in 1957, the respective shares of the federal provincial and local authorities are given as 8, 47 and 45 per cent approximately.[2]

In the Federal Republic of Germany also, the legislation, administration and financing of education are in principle the responsibility of each of the *Land* governments (federated states). The Federal Government does provide for school building in frontier areas, for scientific research, scholarships and exchanges, etc. The municipalities are responsible for the municipal schools, sometimes with the assistance of a grant from the *Land* government. In Switzerland, the Confederation makes grants to cantons and communes for primary, vocational and higher education, and bears all expenditures of the Federal Polytechnic. The cantons and communes share the burden of all educational expenditures, with the help of federal grants.

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[1] Unesco/IBE, *Financing of Education*, p. 99.

[2] Canadian Teachers' Federation, *Educational Finance in Canada, 1946-1956*, p. 21.

In the United States of America where education is considered a function of the state governments, the actual responsibility for operating the schools is largely delegated to local authorities. The relative shares of the federal, state and local authorities in the financing of public primary and secondary education are approximately 3, 40 and 57 per cent.[1] Vocational education receives special aid from federal funds to the extent of about one-fifth of the total expenditures. Higher education, in the case of publicly controlled institutions, is mainly a responsibility of the states and some local governments, with certain grants from the Federal Government. Privately controlled institutions derive most of their income from student fees and auxiliary activities, with some grants from the federal and state governments. In Yugoslavia, another federal country, the only expenditures which appear in the budgets of the republics are those on university faculties and a small number of vocational and special schools. All other educational establishments are financed by the departmental, urban, and communal 'people's committees'. The Federal Government makes grants to scientific research societies and finances educational campaigns of interest to the federation as a whole. It also makes grants to the less developed federated republics which may be used for educational purposes, among others.

Among the non-federal countries where educational financing is shared by the central, regional and local governments, we may mention Belgium, where the State finances all expenditures on education organized by the State, and in addition makes grants to communal pre-primary and primary schools, to provincial, communal and private secondary, vocational and teacher-training schools, and to independent higher education establishments, etc. All other expenditures not covered by the State are borne by the provinces and communes. In Colombia, the State provides for: (a) education in national territories; (b) educational missions among the indigenous population; (c) certain establishments in the departments; (d) grants to certain departmental, municipal and private schools. The departments pay the salaries of primary school teachers, and in certain cases the cost of primary school buildings. The municipalities bear the cost of buildings and furniture for urban and rural schools.

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[1] Unesco/IBE, *Financing of Education*, p. 265.

In France the Ministry of National Education has authority over all public educational establishments; it pays the salaries of all teaching and administrative staffs; makes grants to departments and communes for school building construction and maintenance; and gives assistance to private persons in the form of maintenance scholarships. The departments and communes share the costs of school building construction, maintenance and equipment, which vary according to level of education, and give assistance to private persons in the form of maintenance scholarships. In the Netherlands, the State provides the funds for: (a) salaries of teachers in public and private primary schools; (b) 97 per cent of current expenditures of independent higher primary and secondary schools, and 90 per cent of their construction costs; (c) 82 per cent and 80 per cent respectively of the expenses of day and evening schools of commerce; (d) per-class grants to public higher primary and secondary schools; (e) grants covering 50 per cent of expenditures of public day and evening schools of commerce; and (f) grants covering 70 or 75 per cent of net expenditure of industrial schools. The provincial authorities make certain grants to independent schools; while the communes provide (a) aid to pre-primary schools; (b) the cost of operation and materials of public and independent primary schools; and (c) the cost of operation and materials of public higher primary and secondary schools (with the assistance of a central government grant). In addition, the State meets from 65 to 85 per cent of the deficits of certain autonomous universities and other institutions of higher education, and assumes the entire cost of maintenance and salaries of public and independent teacher-training institutions. The latest report on public educational expenditures in the Netherlands shows that the respective shares of the State, the provinces and the municipalities in the total expenditure in 1956 were approximately 67, 0.2, and 33 per cent.[1]

Educational expenditures in the Philippines are met in large part by the National Government out of its general revenue and parts of certain special taxes such as residence taxes, agricultural products taxes, estate and inheritance taxes, and taxes on income. The provinces and municipalities share to some extent in the financing of secondary and vocational education. No public financial assistance is given to private schools.

Other countries where the public financing of education is shared jointly by the central (or federal), regional and local authorities include: Austria, Czechoslovakia, Luxembourg, Mexico, Norway, Pakistan, and Venezuela.

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[1] Central Bureau of Statistics, *Statistics of the Expenditure of the State, the Provinces and the Municipalities on Education, Science and Culture, 1956*, p. 14.

Classification of expenditures

National reports concerning finances of education vary both as to the extent and as to the nature of the information given. Reports may give only a single figure representing the total budget of the Ministry of Education, or may contain a large amount of detailed information on the income and expenditures of each level of authority or type of institution. The items reported may include only recurring expenditures covering, for instance, salaries and operating expenses for all public schools, or they may include both recurring and capital expenditures, as well as repayment of loans and interest, and cover all levels of education and types of institution. Obviously, an analysis of the costs of education is possible only when all the necessary details are provided. We shall now examine some published official reports on educational finance for a few countries in order to show the various ways in which such information has been compiled and presented in national reports.

For Canada,[1] total expenditures on formal education are reported at 627 million dollars in 1953. This is made up of expenditures by the federal, provincial and municipal governments, as well as by local school boards, universities and colleges, and private schools, as follows:

	$ million	$ million
1. Expenditures by boards of public schools	461	
Less: provincial grants received	146	
Net expenditures by school boards		315
2. Expenditures by private schools		17
3. Expenditures by business colleges		3
4. Expenditures by universities and colleges	62	
Less: federal, provincial and municipal government grants	32	
Net expenditures by universities and colleges		30
5. Municipal governments' contribution to universities and colleges		0.2
6. Expenditures by provincial governments	239	
Less: federal government grants	6	
		233
7. Additional expenditures for education of blind and deaf		0.4
8. Expenditures by the federal government		
(a) for civilians	28	
(b) for veterans	1	
Total expenditures by the federal government		29
TOTAL EXPENDITURES		627

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[1] Dominion Bureau of Statistics, *Preliminary Statistics of Education, 1952-53 and 1953-54*, Ottawa, 1957.

The distribution of the total expenditures of $627 million by level and type of education (in millions of dollars) is as follows:

Expenditures for public education: elementary and secondary schools, 504; government correspondence courses, 1; schools for blind and deaf, 2; teacher training, 5; universities and colleges, 62; Indian schools, 10; other public education, 22.

Expenditures for private education: elementary and secondary schools, 17; business colleges, 3.

An analysis of the revenues ($468 million) and expenditures ($461 million) of public school boards is shown as follows (in millions of dollars):

Current revenues: local taxation, 307; provincial grants, 146; fees, 4; other sources, 11.

Expenditures from current revenues: teachers' salaries, 262; other operating costs, 125; capital outlays from current revenue, and annual payments on capital debt, 75.

Similar statements are given for the revenues ($63.4 million) and expenditures ($62.1million) of private elementary and secondary schools, of business colleges, and of universities and colleges. The statement (in millions of dollars) on universities and colleges shows:

Current revenues: federal grants, 8.7; provincial grants, 23; municipal grants, 0.2; endowments, 3.8; students' fees, 19.4; other sources, 8.3.

Current expenditures (excluding board and lodging, and other ancillary enterprises: 62.1.

The report gives, in addition, public expenditures (federal, provincial and municipal) on vocational and professional training—apprenticeship, youth training and rehabilitation; professional training; vocational training; reform schools—amounting to $14.2 million. Finally, public expenditures (federal, provincial and municipal) on cultural and other related activities— such as libraries, archives and museums; adult education and night schools; educational films and broadcasts; grants to educational and learned societies—amounted to $12.9 million.

In Japan,[1] total educational expenditures by the National Government and by local public bodies amounted in 1956 to 393,194 million yen, representing 5.1 per cent of the total national income, or 21.2 per cent of total public expenditures. The amount spent by the National Government was 132,955 million yen, or 33.8 per cent of the total. Of this amount, 87,621 million yen was spent on subsidies to local public bodies,

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[1] Ministry of Education, *Education in 1957*, Tokyo, 1959.

36,015 million yen on 'National Schools', and the rest for other purposes. The total expenditures by local public bodies, including subsidies from the National Government, was 347,860 million yen, of which 76 per cent was for compulsory education, 16 per cent for upper secondary schools, and the rest for other purposes.

The educational revenues and expenditures of all local public bodies are shown as follows:

	million yen
A. Revenues by source:	
1. National Government subsidies	87 621
2. Revenue receipts from prefectural sources	160 199
3. Revenue receipts from municipal sources	87 748
4. Long-term loans	7 285
5. Donations from parent-teachers' associations	13 350
6. Other donations	3 832
Total revenues	360 036
B. Expenditures by purpose:	
1. Current expenses	286 409
2. Transfer to non-public schools	3
3. Capital outlay	67 794
4. Debt service	5 830
Total expenditures	360 036

The distribution of total expenditures is given by school level or area and by source of revenue, as well as by school level or area and by purpose of expenditure. The distribution of total expenditures and of current expenditures by school level or area is as follows:

	Total expenditures (million yen)	Current expenditures (million yen)
A. School education:		
1. Kindergartens	2 327	1 833
2. Elementary schools	172 633	137 031
3. Lower secondary schools	99 301	76 219
4. Special schools	3 212	2 717
5. Full-time upper secondary schools	48 315	38 859
6. Part-time upper secondary schools	12 071	10 648
7. Miscellaneous schools	201	167
8. Correspondence schools	201	194
B. Social education	8 111	5 422
C. Educational administration	13 663	13 322
TOTAL	360 036	286 412

Analyses of educational costs per pupil show, for each school level or area, the per-pupil costs in current expense and in capital outlay, calculated separately by source of revenue. For example, the costs per pupil in current expenses (teachers' salaries, other instructional expenses, operation of plant, maintenance of plant, auxiliary services, fixed charges) are shown for each level of education as follows: kindergartens, 7,750 yen; elementary schools, 10,940 yen; lower secondary schools, 13,273 yen; special schools, 94,141 yen; full-time upper secondary schools, 24,053 yen; part-time upper secondary schools, 21,004 yen.

Total expenditures for 'social education' include the following categories (in millions of yen): citizens public halls, 3,745; public libraries, 1,702; public museums, 171; physical education facilities, 637; preservation of cultural property, 224; other, 1,631; total, 8,111.

Total expenditures for educational administration include the following items and amounts:

	million yen
A. Current expenses	
1. Allowances and expenses of School Board members	944
2. Salaries and clerical expenses in School Board offices:	
(a) Salaries of superintendents	873
(b) Salaries of personnel	5 719
(c) Travel and other expenses	2 241
3. Supervision:	
(a) Salaries	1 045
(b) Travel and other expenses	548
4. Operation of plant	208
5. Maintenance of plant	54
6. Auxiliary services	194
7. Fixed charges	1 496
B. Capital outlay	315
C. Debt service	26
Total expenditures for educational administration	13 663

In the Netherlands,[1] total expenditures in 1956 for education, science and culture amounted to 1,531 million guilders, of which 1,309 million was for education, 48 million for science and 174 million for cultural purposes. The educational expenditures alone represent 5 per cent of the national income; including the expenditures for scientific and cultural purposes, it is 5.8 per cent of the national income.

The gross expenditures for education, amounting to 1,309 million guilders, include incomes of 16.6 million guilders of which 5.5 million were receipts from school fees. Of the total expenditures for education, the central government paid 872 million guilders (67 per cent), the provinces 2.1 million (0.2 per cent), and the municipalities 435 million (33 per cent). Distribution of the expenditures by purpose shows that 60 per cent was spent on staff costs, 18 per cent on current expenses for materials, 17 per cent on capital outlay, and 5 per cent on other unallocated costs. Distribution of total expenditures by level and type of education is as follows:

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[1] Central Bureau of Statistics, *Statistics of the Expenditure of the States, the Provinces and the Municipalities on Education, Science and Culture, 1956*, Zeist, 1959.

	million guilders
1. Pre-school education	65
2. Teacher training for pre-school education	1
3. Elementary education	500
4. Continued elementary education	18
5. Education for physically and mentally defective children	47
6. Advanced elementary education	111
7. Teacher training	28
8. Secondary education	140
9. Vocational education	183
10. Agricultural and horticultural training	17
11. Higher education	130
2. Other education	25
13. Administration, supervision, etc.	44
Total expenditures	1 309

Expenditures by the central, provincial and municipal governments for scientific and cultural purposes include such items as the following: Organization for Applied Scientific Research; Organization for Pure Scientific Research; Hydraulic Laboratory; Nuclear Physics-Atomic Energy Centre; expenditure on the development of aircraft; museums and archives; libraries and reading rooms; music, including schools for music, opera and dancing; stage; literature; protection of nature; monuments; architecture and plastic arts; archaeological research; youth, including youth organizations, unorganized youth and social youth care; physical training and sports; public entertainments; radio; television; press.

Government expenditures and revenues for these purposes include an amount of 26 million guilders representing the proceeds of radio-revenue stamps received by the government from the listeners and subsequently transferred to the broadcasting associations. Besides this revenue, and a similar amount of 2.2 million guilders from owners of television receivers, the rest of the revenues from cultural activities, amounting to 8 million guilders, consist mainly of admission fees to museums, art galleries, etc.

For the United States of America,[1] income of both publicly and privately controlled institutions at all levels of education for 1953/54 was reported at $14,478 million, of which 80 per cent was, for public and 20 per cent for private institutions. Receipts from governmental sources (federal, state and local) accounted for 94 per cent of the income of public schools, and for 8 per cent of the income of private institutions (almost entirely for higher education).

Total expenditures by educational institutions at all levels, both public and private, amounted to $13,950 million, of which $11,084 million was spent by public schools and $2,866 million by private institutions. Current expenditures (for operating expenses, including interest payments) accounted for 79 per cent of the total; and capital outlay 21 per cent.

Expenditures for public elementary and secondary education were distributed by purpose as follows:

	$ million
A. Current expenditures:	
1. Administration	311
2. Instruction	4 552
3. Plant operation	623
4. Plant maintenance	285
5. Fixed charges	446
6. Other school services	574
7. Summer schools	2
8. Adult education	42
9. Community colleges	23
10. Community services	25
B. Capital outlay	2 055
C. Interest	154
Total expenditures	9 092

The above total did not include expenditures for miscellaneous public elementary and secondary schools, estimated at $80 million and distributed as follows (in millions of dollars): residential schools for exceptional children, 40; federal schools for Indians, 30; federal schools on federal installations, 10.

Total expenditures for private schools, estimated on the basis of per-pupil expenditure in public schools, were shown as follows (in millions): current expenditures, including interest, $1,045 capital outlay, $309; total, $1,354; to which an amount of $10 million should be added as estimated expenditure for private schools for exceptional children.

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[1] Office of Education, *Statistical Summary of Education, 1953-54*, Washington, 1957.

Total income of public and private institutions of higher education amounted to $3,343 million, of which $1,400 million came from governmental sources and the rest from student fees, private benefactions and other sources (including auxiliary enterprises, such as residence and dining accommodation, bookstores, and intercollegiate sports; scholarships, fellowships, and prizes; and private gifts for endowment and other non-expendable funds).

Expenditures of all institutions of higher education amounted to $3,414 million, distributed as follows:

	$ million
A. Current expenditures	
1. Administration and general	288
2. Instructional and departmental research	961
3. Organized research	373
4. Extension and public services	112
5. Libraries	73
6. Plant operation and maintenance	278
7. Related activities	187
8. Auxiliary enterprises	538
9. Scholarships, fellowships, prizes	74
B. Expenditures for plant expansion	
Capital outlay	531
Total expenditures	3 414

The amount of funds spent by the Federal Government for educational purposes is, however, not all included in the above statements. The Office of Education has in recent years compiled and published special reports on funds spent by different agencies of the Federal Government in support of various types of educational programmes. A summary of these expenditures for 1956/57 shows a total of $1,998 million, distributed by government department or agency, as follows[1] (in millions): Department of Health, Education, and Welfare, $491; Department of Agriculture, $399; Veterans Administration, $814; Department of the Interior, $90; Department of Defence, $69; Department of State, $47; National Science Foundation, $33; Atomic Energy Commission, $31; other departments and agencies (Commerce, Labour, Treasury, Justice, Canal Zone, District of Columbia, etc.) $23; total, $19,998.

Distribution of these funds by type of programme was as follows (in millions): elementary and secondary education, $657; higher education, $1,033; adult education, $87; in-service training of civilian personnel, $3.5; education of merchant marine and military personnel, $34.5; research in educational institutions, $133; international education, $50; total, $1,998.

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[1] Office of Education, *Federal Funds for Education, 1956-57 and 1957-58*, Washington, 1959.

Data for international reporting

It is obvious that, for purposes of international comparison, it is not enough just to put together such financial data on education as are found in national reports. The data need to be classified and tabulated in a more comparable manner, involving some filling of gaps (if necessary by estimation), rearrangement of items, and especially ample notes and explanations so that they can be easily interpreted. A beginning in this direction has been made by the adoption of an international recommendation concerning classification of data on educational finance, as follows:

> *Statistical data on educational finance, for a given fiscal year, should, as far as possible, be classified as follows:*
>
> (a) *Receipts*
>
> (i) *From public authorities, such as: central government or federal government; provincial, State or similar governments; county, city, district, or other local authorities.*
>
> (ii) *From other sources (including tuition fees, other receipts from parents, endowments, etc.).*
>
> (b) *Expenditures*
>
> (i) *Recurring expenditures (not including payments of interest): for administration or general control; for instruction, classified where possible as follows: salaries to teachers and other directly supportive professional staff, other instructional expenditures; all other recurring expenses.*
>
> (ii) *Capital expenditures (not including debt service): educational; non-educational (residence halls, cafeterias, bookstores, etc.).*
>
> (iii) *Debt service.*

It is further recommended that tabulations should be made of receipts by source, and expenditures by purpose, with subclassifications corresponding as nearly as possible to the recommended classification of schools (see Chapter VI of this manual), and the classification of accounts as given above. It is also recommended that, if possible, distinction should be made between expenditures for public and private schools, between expenditures for instruction and other accounts, and between expenditures for education at the third level and education at other levels.

In this connexion, we may refer to the Unesco questionnaire for the *World Survey of Education*, Volume III, which requests statistics on educational finance in the following form:[1]

Educational receipts by source. (1) Central or federal government. (2) Provincial, State or similar government. (3) County, city, district or other local authorities. (4) Tuition fees. (5) Other gifts from parents. (6) Gifts, endowments, etc. (7) Others sources (specify).

Educational expenditures by purpose.

A. Recurring expenditures: (1) For administration or general control. (2) For instruction: (a) salaries to teachers and other directly supportive professional staff; (b) other instructional expenditures. (3) Other recurrent expenditures.

B. Capital expenditures (not including debt service): (4) Educational facilities (school buildings, classroom and laboratory equipment, etc.). (5) Auxiliary facilities (residence halls, cafeterias, bookstores, etc.).

C. Debt service.

Recurring expenditures for education, by level and type of education.

A. Central administration (not distributed by level and type of education).

B. Instructional expenditures (distributed by level and type of education): (1) Education preceding the first level (pre-school education). (2) Education at the first level (primary education). (3) Education at the second level (secondary education): (a) general; (b) vocational; (c) teacher training. (4) Education at the third level (higher education). (5) Special education. (6) Adult education. (7) Other types of education.

C. Other recurring expenditures.

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[1] Unesco, *Questionnaire on Statistics of Educational Institutions and Statistics of Educational Finance* (ST/Q/37), Paris, 1959.

Appendix

Recommendation concerning the international standardization of educational statistics adopted by the General Conference of Unesco at its tenth session, Paris, 3 December 1958

The General Conference of the United Nations Educational, Scientific and Cultural Organization, meeting in Paris from 4 November to 5 December 1958 at its tenth session,

Considering that Article VIII of the Constitution of the Organization specifies that 'each Member State shall report periodically to the Organization, in a manner to be determined by the General Conference, on its laws, regulations and statistics relating to educational, scientific and cultural life and institutions',

Convinced that it is highly desirable that the national authorities responsible for the compilation and reporting of statistics relating to education should be guided by certain standard definitions, classifications and tabulations, in order to improve the international comparability of their data,

Having before it proposals concerning the international standardization of educational statistics which constitute item 15.3.1 of the agenda of the session,

Having decided, at its ninth session, that these proposals should be regulated at the international level by way of a recommendation to Member States, Adopts this third day of December 1958, the present Recommendation:

The General Conference recommends that Member States should, for purposes of international reporting, apply the following provisions regarding definitions, classifications and tabulations of statistics relating to education, by taking whatever legislative or other steps may be required to give effect, within their respective territories, to the principles and norms formulated in the present Recommendation.

The General Conference recommends that Member States should bring the present Recommendation to the knowledge of authorities and organizations concerned with the compilation and reporting of educational statistics.

The General Conference recommends that Member States should report to it, on dates and in a manner to be determined by it, on the action which they have taken to give effect to the present Recommendation.

1. STATISTICS OF ILLITERACY

Definitions

[1] The following definitions should be used for statistical purposes:

(a) A person is *literate* who can with understanding both read and write a short simple statement on his everyday life.

(b) A person is *illiterate* who cannot with understanding both read and write a short simple statement on his everyday life.

Methods of measurement

[2] To determine the number of literates and illiterates, any of the following methods could be used:

(a) Ask a question or questions pertinent to the definitions given above, in a complete census or sample survey of the population.

(b) Use a standardized test of literacy in a special survey. This method could be used to verify data obtained by other means or to correct bias in other returns.

(c) When none of the above is possible, prepare estimates based on: (i) special censuses or sample surveys on the extent of school enrolment; (ii) regular school statistics in relation to demographic data; (iii) data on educational attainment of the population.

Classification

[3] The population aged 10 years and over should be classified first into two groups: literates and illiterates.

[4] Each of these groups should be classified by sex, and also by age in the following groups: 10-14, 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, 65 years and over.

[5] Additional classifications should be made, where appropriate, for:
(a) Urban and rural populations;
(b) Such ethnic groups as are usually distinguished within a State for statistical purposes;
(c) Social groups.

II. STATISTICS ON THE EDUCATIONAL ATTAINMENT OF THE POPULATION

Definition

[6] The following definition should be used for statistical purposes: The *educational attainment* of a person is the highest grade or level of education completed by the person in the educational system of his own or some other State.

Methods of measurement

[7] To measure the educational attainment of the population, the following methods could be used:
(a) Ask a question or questions pertinent to the definition given above, at a complete census or sample survey of the population.
(b) Where this is impossible, prepare estimates based on: (i) data from previous censuses or surveys; (ii) records over a number of years of school enrolment, of examinations, of school-leaving certificates, and of degrees or diplomas granted.

Classification

[8] The population 15 years old and over should be first classified by educational attainment, expressed preferably in terms of highest grade completed, but at the least in terms of level of education completed. Whenever possible, distinction should also be made among different types of education at each level.

[9] Each of these groups should be classified by sex and also by age in the following groups: 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, 65 years and over.

[10] Additional classifications should be made, where appropriate, for:

(a) Urban and rural populations;

(b) Such ethnic groups as are usually distinguished within a State for statistical purposes;

(c) Social groups.

III. STATISTICS OF EDUCATIONAL INSTITUTIONS

Definitions

[11] The following definitions should be used for statistical purposes:

(a) A *pupil* (*student*) is a person enrolled in a school for systematic instruction at any level of education. (i) A *full-time pupil* (*student*) is one who is enrolled for full-time education for a substantial period of time. (ii) A *part-time pupil* (*student*) is one who is not a full-time pupil (student).

(b) A *teacher* is a person directly engaged in instructing a group of pupils (students). Heads of educational institutions, supervisory and other personnel should be counted as teachers only when they have regular teaching functions. (i) A *full-time teacher* is a person engaged in teaching for a number of hours customarily regarded as full-time at the particular level of education in each State. (ii) A *part-time teacher* is one who is not a full-time teacher.

(c) A *grade* is a stage of instruction usually covered in the course of a school year.

(d) A *class* is a group of pupils (students) who are usually instructed together during a school term by a teacher or by several teachers.

(e) A *school* (educational institution) is a group of pupils (students) of one or more grades organized to receive instruction of a given type and level under one teacher, or under more than one teacher and with an immediate head. (i) A *public school* is a school operated by a public authority (national, federal, State or provincial, or local), whatever the origin of its financial resources. (ii) A *private school* is a school not operated by a public authority, whether or not it receives financial support from such authorities. Private schools may be defined as *aided* or *non-aided*, respectively, according as they derive or do not derive financial support from public authorities.

(f) The *compulsory school age* population is the total population between the age limits of compulsory full-time education.

Classification

[12] Education should be classified as far as possible by level as follows:

(a) *Education preceding the first level*, which provides education for children who are not old enough to enter a school at the first level (e.g., at nursery school, kindergarten, infant school).

(b) *Education at the first level*, of which the main function is to provide basic instruction in the tools of learning (e.g., at elementary school, primary school).

(c) *Education at the second level*, based upon at least four years previous instruction at the first level, and providing general or specialized instruction, or both (e.g., at middle school, secondary school, high school, vocational school, teacher training school at this level).

(d) *Education at the third level*, which requires, as a minimum condition of admission, the successful completion of education at the second level, or evidence of the attainment of an equivalent level of knowledge (e.g., at university, teachers' college, higher professional school).

[13] Education which is not usually classified by level should be placed under one of the following headings:

(a) *Special education*, covering all general or vocational education given to children who are physically handicapped, mentally handicapped, socially maladjusted or are in other special categories.

(b) *Other education.*

[14] Where possible, education of the second level should be subdivided by type as follows:

(a) *General education*, which does not aim at preparing the pupils directly for a given trade or occupation. Where appropriate, general education should be further subdivided as follows: (i) *lower stage*, in which general instruction is given, with orientation of pupils according to interests and aptitudes (e.g. at junior middle school, junior secondary school, junior high school); education at this stage may lead to various types of instruction at a higher stage; (ii) *higher stage*, in which some differentiation is provided in the types of instruction according to the interests and aptitudes of the pupils (e.g. at senior middle school, senior secondary school, senior high school).

(b) *Vocational education*, which aims at preparing the pupils directly for a trade or occupation other than teaching. Where appropriate, vocational education should be further subdivided as follows: (i) education which is mainly *practical*; (ii) education which is mainly *technical and scientific*.

(c) *Teacher training*, which aims at preparing the pupils directly for teaching.

[15] Education at the third level should, as far as possible, be classified by type as follows:

(a) Education at universities and equivalent institutions leading to an academic degree;
(b) Teacher education at non-university institutions;
(c) Other education at non-university institutions.

Tabulations

[16] Tabulations should be made regularly of the types of data listed below, the figures conforming as far as possible to the standard definitions and classifications given in paragraphs 11 to 15 inclusive. Since the characteristics of the educational system in each State should always be taken into account, deviations from the international definitions and classifications should be reported. Whenever possible, separate figures should be presented for public and private schools. Where appropriate, private schools could be subdivided into those aided and those not aided by public authorities.

(a) *Education preceding the first level:* (i) Number of schools. (ii) Number of teachers by sex, and by qualification (according to the practice in each State). (iii) Number of pupils by sex.

(b) *Education at the first level:* (i) Number of schools. (ii) Number of teachers by sex, and by qualification (according to the practice in each State), classified where appropriate as full-time or part-time teachers. (iii) Number of pupils by sex.

(c) *Education at the second level*, not including teacher training. Separate tabulations should be made, where appropriate, for general education (lower and higher stages) and vocational education by broad types. (i) Number of schools. (ii) Number of teachers by sex and by qualification (according to the practice in each State), classified, where appropriate, as full-time or part-time teachers. (iii) Number of pupils by sex, classified where appropriate as full-time or part-time pupils. (iv) Number of pupils, by sex, who during the year obtained diplomas upon completion of the second level.

(d) *Education at the third level*, not including teacher education at non-university institutions. Separate tabulations should be made, where possible, for education at universities and equivalent institutions, and for education at non-university institutions. (i) Number of schools. (ii) Number of teachers by sex. (iii) Number of students by sex, nationality and field of study (or, if that is not possible, by sex and field of study). Where appropriate, undergraduate and post-graduate students should be tabulated separately. (iv) Number of first-year students by sex. (v) Number of students who obtained degrees or diplomas during the year, by field of study and by type of degree or diploma.

(e) *Teacher education.* Separate tabulations should be made, where possible, for schools at the second and at the third level. Where appropriate, separate tabulations should also be made for the levels of education for which the pupils (students) are being trained. (i) Number of schools; and number of classes of teacher education in schools classified elsewhere. (ii) Number of teachers by sex. (iii) Number of pupils (students) by sex. Where appropriate, full-time and part-time pupils (students) should be tabulated separately. (iv) Number of first-year pupils (students) by sex. (v) Number of pupils (students) who completed their course of study during the year, classified by sex and by type of diploma or by specialization.

(f) *Special education.* Separate tabulations should be made, where possible, for each type of special education (e.g., education for the blind, for the mentally retarded, for juvenile delinquents, etc.). (i) Number of schools; and number of classes of special education in schools classified elsewhere. (ii) Number of teachers by sex, and by qualification (according to the practice in each State). (iii) Number of pupils by sex.

(g) *Other education.* Separate tabulations should be made, where possible, for each type of such education. (i) Number of schools and/or classes. (ii) Number of teachers by sex. (iii) Number of pupils (students) by sex.

(h) *General tables.* (i) Population data. The population 5-24 years of age should be tabulated, by single years of age and by sex, according to the latest available census and current estimates. If this is not possible, census data and current estimates should be reported at least for the age groups 5-9, 10-14, 15-19 and 20-24 years, and separately for the compulsory school-age population. (ii) Number of pupils (students) by age and sex or by grade and sex, classified by level and and type of education. (iii) Where possible, separate tabulations should be made of pupils (students) classified by age or grade, and by full-time or part-time attendance. (iv) Pupils at the first and the second levels of education, separately or together, should, where possible, be classified by grade, sex and age. (v) For schools at the first level of education, tabulations should be made of the number of classes by size. The following groupings should be used: less than 15 pupils, 15-49 pupils (subdivided into groups suitable for each State), and 50 pupils or more. Where possible, the total number of pupils in each of the groups should also be reported.

IV. STATISTICS OF EDUCATIONAL FINANCE

Definitions

[17] The following definitions should be used for statistical purposes:

(a) *Receipts* refer to cash received by or made available to or for schools, including appropriations, subventions, fees, cash value of property received as gifts, etc.

(b) *Expenditures* refer to financial charges incurred by or on behalf of schools for goods and services.

(c) *Recurring expenditures* include all expenditures except those for capital outlay and debt services.

(d) Capital expenditures refer to expenditures for land, buildings, equipment, etc.

(e) *Debt service* refers to the payment of interest and the repayment of the principal of loans.

Classification

[18] Statistical data on educational finances, for a given fiscal year, should, as far as possible be classified as follows:

(a) *Receipts*. (i) From public authorities, such as: central government or federal government, provincial, State or similar governments, county, city, district, or other local authorities. (ii) From other sources (including tuition fees, other receipts from parents, endowments, etc.)

(b) *Expenditures*. (i) Recurring expenditures (not including payments of interest): for administration or general control; for instruction, classified where possible as follows: salaries to teachers and other directly supportive professional staff, other instructional expenditures; all other recurring expenditures. (ii) Capital expenditures (not including debt service): educational; non-educational (residence halls, cafetarias, bookstores, etc.). (iii) Debt service.

Tabulations

[19] Tabulations should be made of receipts by source, and expenditures by purpose, with sub-classifications corresponding as nearly as possible to the classifications given in paragraphs 12 to 15 and in paragraph 18 of the present Recommendation, consistent with the administrative and financial practices in each State. If possible, distinction should be made between expenditures for public and private schools, between expenditures for instruction and other accounts, and between expenditures for education at the third level and education at other levels.

The foregoing is the authentic text of the Recommendation duly adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization during its tenth session, which was held in Paris and declared closed the fifth day of December 1958.

IN FAITH WHEREOF we have appended our signatures this fifth day of December 1958.

The President of the General Conference
JEAN BERTHOIN

The Director General
LUTHER H. EVANS

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